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CONSOLES
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Pen-and-pad portable is priced at £1,000

SONY KEYBOARDLESS HANDHELD SET FOR FAR EASTERN LAUNCH

Next week Sony will launch an extraordinary portable computer without a keyboard but with a price tag of the equivalent of £1,000.

The PalmTop PCT-500 will have a writing tablet and pen instead of a keyboard or mouse. Users will be offered a grid of squares to write on – each character is pencilled into a square to avoid messy print-outs. The final hard copy will not be of the user's handwriting but will appear as a typed document.

The PalmTop is to be launched on Sunday in Tokyo at a cost of 198,000 yen. Although a UK launch has not been announced, the machine could quite well become available here within 12 months. However, it is the Far Eastern market which most attracts Sony.

Now handheld computing will be available to people who want to use oriental character sets. In the past that has been impossible on keyboards because of the number of characters involved in these languages – thus the Japanese have often been forced to use alpha-numeric members or even English.

The machine uses a specially configured word processor called PalmNote and runs on the Motorola MC68HC000 processor. It has 320Kb of RAM – enough for 110 A4 pages of text – and runs at a speed of 8Mhz. The machine measures 205mm x 45mm x 158mm. Power source is through mains or by battery. It also comes with the option of a fax adapter.

A spokesman for Sony UK admitted that a keyboard would probably be better for Western users, although he also said the firm was looking at specialist areas such as security. ■

Nintendo quashes rebels in Washington court ruling

An attempt by Atari Games to sell Nintendo compatible cartridges is running into trouble following a court ruling last week.

The US Circuit Court of Appeals in Washington DC stated that Nintendo may sue retailers who sell unauthorised cartridges. Atari Games had hoped to overcome Nintendo's policy of controlling all software releases for its popular games console.

This decision is preliminary to the real scrap between Atari Games and Nintendo which will decide whether or not Atari can manufacture 'unauthorised games'. It also nullifys an injunction taken out by Atari Games which protected retailers who chose to sell Atari Games' versions of Nintendo cartridges.

The court said that the restrictions which Nintendo places on its products did not violate American business law.

In a strongly-worded statement characteristic of this bitter legal wrangle, Nintendo's senior vice president, Howard Lincoln, said: "The decision makes clear that disappointed competitors in the marketplace cannot use the courts to misappropriate the rights of others or to substitute baseless allegations for their unwillingness to compete fairly in the marketplace."

In effect it makes the possibility of 'Nintendo rebels' releasing their own games very slim. Atari Games is not affiliated to Atari Corp.■

Pilots 'can't trust' on-board computers

Pilots of commercial passenger aircraft can't trust their on-board computers, according to the leader of pilot's union BALPA.

He has hit out at a BBC2 documentary which claimed that pilots operate on autopilot for 98 per cent of air time and that they were overpaid and underworked "jet jockeys".

Mark Young, head of the British Airline Pilots Association said pilots could not rely on computers, which are faulty and unreliable.

"It is not uncommon for one, two and occasionally all three autopilots to fail completely," he said. "When this happens the crew continue to fly the plane manually. It is their expertise which makes air travel as safe as it is." He said the computers sometimes "fail and often give misleading information".

"On-board computer failure is now an accepted everyday occurance in the working life of a pilot." ■

Bloody Kids here for the skateboarders

Skateboarders would do well to practice their activities in places other then shopping precincts and around old people's homes – or so the logic behind a new Interceptor launch would make it seem.

Based on a popular comic strip featured in *Skateboard* magazine *Bloody Kids* gives you the chance to control a skating boy who is trying to make an honest living.

On the board you have to deal with a difficult assault course, and then undertake a series of odd-jobs on your skateboard. It should be out on the ST and Amiga within six weeks, with 8-bit versions to follow.

The game will appear on Interceptor's Smash 16 budget label for £4.99 (£2.99 for 8-bit micros). Call 0734 817421.■

• Bloody Kids: *on the streets soon*

'Computer elbow' trio win £100,000 in damages

Three woman who were forced to quit their jobs because they suffered from 'computer elbow' or Repetitive Strain Injury have been awarded damages totalling £107,500.

All of the women had been employed by the Inland Revenue at Durrington in Sussex. Their jobs had involved sitting at a computer all day making data entries. It is now accepted that long periods of typing work at a computer can harm the muscles of the arm.

The trio could not continue because the RSI was too painful. A number of journalists are also making claims against employers after developing RSI. This malady has come about because word processing requires restricted hand movements. Operators of typewriters don't suffer because their hand movements are more varied – moving the carriage and changing paper for example.

Irene Kay, Caroline Thomas and Sharon Armstrong were awarded £43,000, £42,500 and £22,000 respectively. ■

Game for the greedy

Fans of psychotic shoot-'em-ups or thrashing ninja affairs have been playing games for pussycats. Now there's a new game based on the most vicious place on earth – Wall Street.

Wall Street Wizard gives you the chance to trade and deal in that most unpleasant place. At your disposal are are a number of little tricks such as bribery, corruption, sabotage and espionage as well as a few million bucks.

You can tap into data sources, company profiles, news extracts and gossip, and you can employ a few private detectives. There's also on-line bidding against the clock for the especially greedy.

Curiously, the game was originally written for the German market and has been translated into English for Data Liberation. It is available for the ST, Amiga and PC at the cost of £39.95. Call 0788 75010. ■

COMING SOON

Europe's main event

Next week you can catch all the news from Hanover CeBit, Europe's biggest computer show.

Commodore and Atari will be there along with all the major players from the continent, North America and the Far East. Described as a melting pot for the world's most advanced ideas, the show acts as a link between developers from America and Japan as well as a showcase for the latest European technology.

There will be a report on the launch of the Gigatron 'portable Amigas', which are set to hit the UK as soon as distribution deals are confirmed, and we will be looking at Commodore's reaction to these new developments.

In addition, there will be news on Commodore's newest bundle, expected to be launched this week. Watch this space for more details.■

CD-Amiga spurs plans for relaunch of CD-ROM

ATARI PUSHES ST-CD BACK ON THE AGENDA

• Mega ST: Internal CD drive?

Despite claims to the contrary, it is now certain that Atari is planning to re-launch itself into the CD-ROM technology race.

In last week's *Express* Atari's UK boss, Bob Gleadow, said that CD-ROM was a confusing mish-mash of conflicting standards geared towards a market that hardly exists. This week Atari's official UK press spokesman, Peter Walker, attempted to clarify the firm's position.

He says that among the topics to be discussed at Atari's software developers conference in Didcot this week will be "the firm's position on future technology and trends including – possibly – Compact Disc".

Although talk will be primarily about the new STE and Lynx, Atari is also known to be unveiling "the latest high tech development project". Atari says discussions will "not be unadjacent to CD developments", and other parties will be required to sign strict non-disclosure agreements.

While this Whitehall-speak may not appear to be the language of a wholly dedicated company, it is clear that Atari wants to extend work on CD-ROM. Atari feels that it established a CD-ROM beachhead three years ago when it launched its CD player for the ST. However, due to a lack of software and the market's immaturity, the project was never pushed by Atari.

Now, though, the company both here and in the US is looking for ways of capitalising on new-found interest in the medium. There is a genuine concern that despite early advances Atari will be left behind. Commodore, for example, is to launch its CD version of the Amiga.

One project said to be under consideration is to house a CD drive inside the Mega ST and launch the machine as an all-in-one CD option. Unlike the Amiga model this would be pitched not as a games machine but as a state-of-the-art business option. Atari would be able to tap into an increasing number of CD applications attached to business, industry and education.

In the short term the firm is looking at re-launching the original CD-ROM as a mass market product. It would be repackaged and bundled with games on a CD, and might include more serious CD applications – an encyclopaedia is just one feasible option.

Technical people inside Atari UK are known to have been working on a Hypercard lookalike which would act as a front-end for CD-ROM products. There is also talk of a CD-ROM which will be able to work on both the ST and the PC.

Developers have been keen to push this technology forward but, until now, have been blocked by unconvinced marketing executives. ■

Atari ships 4,000 Lynx handhelds into Britain

Gamers waiting anxiously for first shipments of Atari's Lynx hendheld can rest assured that stocks of the machine will be here this week.

• Lynx: on time.

Atari says it has shipped some 4,000 machines to the UK which will be distributed as evenly as possible around Britain. Follow-up shipments are expected within the next few weeks, although it is highly probable that stocks will be patchy.

Anyone with the £179 asking price (this includes a battery recharger) should get down to their local dealer and make themselves known. Software cartridges will also be available.

Thus far, the only people with a Lynx machine have been buying from importers. However, availability of these has been somewhat restricted because of demand in the United States.

An Atari spokesman was keen to stress that the Lynx machines have arrived in the UK on time. "Unlike some hardware manufacturers who make optimistic claims about availability at launch time, we've kept to all our deadlines," he said. ■

Kosmos gets continental

ST owners keen to expand their horizons are soon to be offered a series of foreign language courses for use on their machines.

From education software specialist Kosmos comes *The French Mistress*, *The German Master*, *The Spanish Tutor* and *The Italian Tutor*. All four programs have been around on other formats for some time and are designed to get learners through the rudimentaries and up to GCSE examination standard.

The programs are arranged under different headings such as The Family, The Dwelling, Vehicles, Substances and Parts of the Body. Each has 2,500 items of vocabulary. They are available for the cost of £19.95.

Kosmos is also to launch two educational quiz programs – *Answer Back Junior* and *Answer Back Senior*. Each combines about 750 questions on anything from nursery rhymes to inventions.

The packages are currently priced at £19.95. For more information, phone the people at Kosmos on 05255 3942.■

• *Learn your German:* The German Master

Many teachers have 'negative attitude' towards technology

PRIMARY SCHOOLS IGNORE COMPUTERS SAYS REPORT

A four-year study into the use of computers in Britain's primary schools has revealed that many teachers feel computers are unsuitable tools for younger children.

The study – funded by the Economic and Social Research Council – found that more teachers of five- to seven-year-olds had a negative attitute towards computers than tutors of children in the seven-to-eleven-year-old age bracket.

While more than 50 per cent of junior school classes surveyed used computers, only one fifth of infant classes were given access to them.

The report also found that the attitude of a school's head teacher was of singular importance to computer education among young children. Furthermore, the report stated that teachers, when left to their own devices, rarely bother to instigate computer-related learning courses.

Many teachers felt that setting up and taking down equipment took up too much time. And computer training is a burden which many teachers prefer to avoid. Of the 129 teachers interviewed only 40 per cent had received any training, and of those, only just over half, 56 per cent, were observed using a computer with children.

The researchers found that many teachers questioned the relevance of computers in a classroom which deals with primary education. Computer use was most prominent in the few schools which regarded technology as an integral part of their curriculum.

The study was conducted by Margaret Cox and Valerie Rhodes at the Education Computing Unit of King's College, London. It was funded by the ESRC (£45,000), the London Education Authority (£30,000) and Research Machines (£5,000).

It recommended that teachers gain personal confidence with computers through a variety of training courses, while also stating that the curriculum should focus on a short list of open-ended software packages – to encourage competence and confidence.■

Beebs going free

Acorn is to hand over nearly £16,000 worth of computer kit to winning entries in this year's Royal Mail Letter Writing Competition.

Now in its 16th year, the challenge is one of the most popular in education. Last year a record 145,000 entries were received.

The theme for this year's cometition is 'Something Amazing'. Acorn has added an extra catagory and will award BBC A3000 machines to the three entries which make best use of technology. The overall winner will also receive a printer, the *Acorn DTP* package and word processing facilities.

• *A3000: letter link*

All of the Acorn kit will be donated to the schools attended by the winning entrants.

"We want to inspire pupils to use computers in all aspects of conventional school work and recreational and fun activities – such as writing to friends and relatives," said Acorn's sales and marketing manager for education, Chris Humphreys. "With more children having access to computers at home we hope that the addition of this new catagory may encourage this enthusiasm."

Presentations will be made by television presenter Caron Keating at an awards ceremony later on in the year.

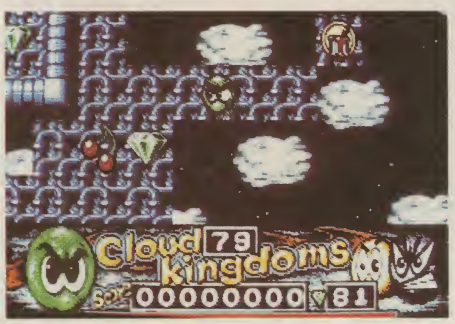
Young readers who wish to enter should talk to their English teacher.■

Groo! more cuteys

The astounding success of games such as *New Zealand Story* and *Rainbow Islands* can mean only one thing – cuteness is very in.

And just to prove it comes *Cloud Kingdoms* from Logotron Entertainment. It features eight-way scrolling, thirty two levels and all the usual collectables and pitfalls. Logotron reckons it's even more addictive than *Super Mario Brothers*.

The game is due out on the ST, Amiga, C64 and PC shortly, priced from £9.99 to £29.99.■



• Cloud Kingdoms: lovely.

Colouring the fax

The past decade has seen two items become virtually indispensible to business – the personal computer and the fax machine.

This autumn will mark the launch of the first full-colour desktop fax machine. Sharp in Japan has developed a device which uses digital image processing and compression techniques to transmit colour documents. What's more, the machine is compatible with standard fax machines.

It uses a printer with a thermal head. The ribbon contains layers of ink which are sensitive to heat – therefore, the colour print-out will depend on the heat applied to the ribbon.■

Infocom goes Cyber-horror

Infocom, for years a leader in the world of adventure games, is to launch a game based on a nightmare cyberpunk prediction of tomorrow's world.

Circuit's Edge has been put together in collaboration with science fiction author George Alec Effinger. It is set in a period which straddles two of his famous works – *When Gravity Fails* and *A Fire in the Sun*.

As in recent graphic adventures from Infocom, players can interact with different characters in the game. This time, though, you are a cyber investigator who has to talk to beggars, prostitutes and villains.

There are also various objects which can be picked up using a simple mouse interface.

Circuit's Edge is promised to be challenging and intriguing and is clearly aimed at mature gamers. It will be launched in the UK next month by Activision on the PC with a price tag of £29.99.

Gamers get serious

Fans of the more serious computer games can look forward to a new line-up of chess, gammon and go games from CP Software and Oxford Softworks.

Oxford Softworks' *Chess King 2150* is an updated version of the well known *Chess Player 2150*. It features an expanded feature list and improved playing strength, costs £29.95, and is available for the ST and Amiga.

PC owners are to be offered the original *Chess Player 2150*. That costs £24.95.

And for the ST, PC and Amiga there's *Backgammon Player Professional* (£19.95) and *Go Player Professional* (£29.95).

All are available in English, French, German and Spanish. Call 0993 823463.

Time for Timeworks

Desktop publishing. Everyone's talking about it – but how easy is it for the beginner?

In an attempt to draw in the novices the ST Club has produced its own manual for top DTP package *Timeworks*. It's been written by David Smith, who has learnt DTP from scratch using *Timeworks*.

The book will help ST owners who want to produce posters, CVs, reports, theses or even their own manual. It costs £9.95 and is out at the beginning of May. Call 0602 410241.

Research puts old favourite ahead – but only just

WORDSTAR STILL IN FRONT IN WP WAR

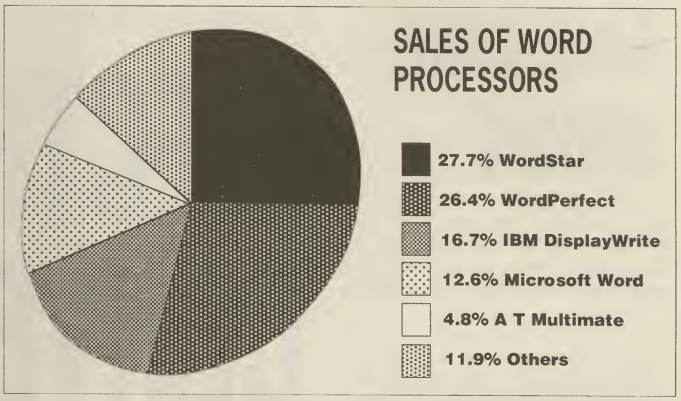
Figures just released by the influential BMIS Software Report indicate that *WordStar* is still winning in the word processing stakes – although by a slender margin.

Figures for the year ending November 1989 give *WordStar* a 27.7 per cent share of the WP pie. But *WordPerfect* is just behind with 26.4 per cent. The report from Context states that 47,101 copies of *WordStar* were bought by UK PC owners in that period with 44,905 opting for *WordPerfect*.

In third place came IBM with its *DisplayWrite*. That sold 28,444 copies and managed to carve out a 16.7 per cent share. *Microsoft Word* had 12.6 per cent with Ashton Tate's *Multimate* taking 4.8 per cent.

Less popular were packages from Lotus (2.6 per cent), Amstrad (2.2 per cent), WordCraft (1.1 per cent) and Samna with 1 per cent. Other options made up the final five per cent.

John Speller, the managing director of WordStar UK, commented: "We are delighted with the findings as they accurately reflect what we have always known. We have been at or near the top of the league table for 10 years and we intend to maintain our lead by providing customers with continued improvements through an expanding programme of research and development."



The company has recently launched version 6.0 of the program which remains one of the most successful pieces of software to date. *WordStar* has an installed world-wide base of 3.5 million users and boasts 14 different language versions. It has spawned a host of look-alike programs.

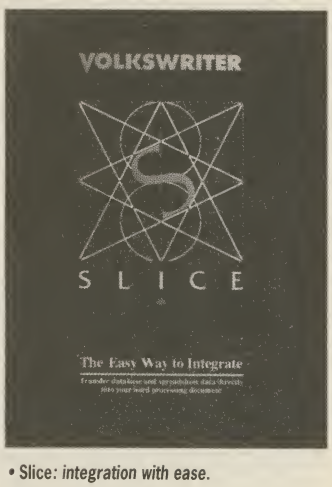
IS IT A BOMB?

How very very queer. What, you may ask, is this mysterious trinket?

Fear not, the answer is simple. This circular gadget is none other than the latest in revolutionary joystick design. It hails from Porteus, a company which says it can take a fresh approach to computer games – its former activities include making clocks.

But it was time for a change, and so the company looked at the increasingly frustrating world of joysticks. It reckons the old formula based on aircraft joysticks was simply not suitable. "This sits in the base of your hand, it's more comfortable, you need less pressure and you don't get blisters," says the firm's Elaine McKenzie.

The Warp 1 is operated by a series of touch-sensitive pads which are apparently really easy to get to grips with. It can handle a pretty impressive firing average of 1,000 to 1,200 shots per minute and costs £17.99. Call 0384 298259.



• Slice: *integration with ease.*

Slice it up

Volkswriter has launched a file integration tool which will allow Lotus and *dBase* users to produce integrated documents.

Slice is a memory resident program which allows users to transfer data from a database or spreadsheet on to a word processor without quitting the document. It gives you the chance to share and integrate data that is not normally compatible.

Slice costs £75. Call 0494 772957 for more details.

Computer Tipster backs 100-1 Gold Cup winner

Staff at horse racing computer tipster firm TAM were in jubilant mood last week after their gambling program gave them a 100-1 winner.

The staff don't use their program — *The Tipster* – for every race, but were intrigued when it predicted that the winner of the Cheltenham Gold Cup would be no-hoper Norton's Coin, followed by Toby Tobias. The computer reckoned Desert Orchid would scrape in fifth.

Not surprisingly they all scuttled down to the bookies and made £1 each-way bets.

Perhaps they should have had more faith in the computer program. It was completely correct on the first two, with Dessie coming in third.

But how did the computer program, which simply works on the basis of form and going, predict what the racing community failed to notice? "The whole race was hyped, especially Desert Orchid," said boss Steve Marriott. "They all laughed at us at the bookies when we laid the bets, but they didn't find it so funny when we went to pick up the winnings – £1,000 in all."

Sceptical readers can be assured that the winning betting slips were faxed to *Express*. Nevertheless, leading bookies all say computer programs can do no more than any skilled human tipster.

The Tipster is available on the ST, Amiga and PC and costs £29.95. Call 0392 215485.

• Right: Norton's Coin was computer tipped.

Chip gang chased

It is believed that two men from Orange County, California, will be charged this week for in connection with a spate of DRAM chip thefts in Oklahoma.

A string of thefts hit AT&T's chip plant in Oklahoma City between May 1988 and January 1989. An indictment from the Orange County Register names two men who will be charged on eight counts of conspiracy, inter-state transportation of stolen goods and money laundering.

The men, who are both at large, are Vietnamese and are understood to be connected to a number of Vietnamese groups involved in chip thefts around the US.

The infamous raids on chip plants have often involved gun-toting men dressed in ninja outfits.

The men were tracked down by the Internal Revenue Service which traced a large flow of money from Orange County to Oklahoma. Officials had believed the laundered money was the result of illegal drug sales. The chips had been sold through Californian computer shops. ■ (Newsbytes).

Coin-op firm comes to home computers

ELECTROCOIN PLANS CONVERSION FLURRY

A new games software publisher has been set up with arcade conversions specifically in mind.

Electrocoin Software is affiliated to Electrocoin which has been active in the arcade world for the past 15 years. The firm has been involved in everything from releasing its own arcade games and pinball machines to manufacturing and distributing arcade hardware for other coin-op manufacturers.

The first game, out in a few weeks, is a conversion of SNK's *Time Soldier*. Described as being similar to *Ikari Warriors* it is set in different time zones from the prehistoric age to a 'world war zone'.

Electrocoin's contacts in the arcade business may put it in an advantageous position over established arcade licence hunters such as Ocean and US Gold. The firm hopes its conversions will convince the licence holders.

"We have to be able to bring a more arcade feel to products and we'll be attempting to enhance and make additions to arcade originals. People want games which are playable," said the firm's Kevin Williams.

Williams has been active in the industry since his days as a reviewer on *C&VG*. He was also partly responsible for the story board for System 3's massive hit *Last Ninja*.

The firm is employing five in-house coders to do the conversions, although *Time Soldier* was produced in collaboration with development house Smart Egg Software.

The game is out now on the ST, Amiga and C64. Other versions will follow, depending, says the company, on "the public's support". ■

DTP 4 USSR – OK

The growing number of pamphleteers and political newspaper publishers in the USSR are soon to have access to top quality Western desktop publishing programs.

Aldus last week unveiled a Russian version of *PageMaker* 3.0 at the Comtec '90 show in Moscow. The Cyrillic package for the PC comes with manuals in Russian and customers are promised the same level of support offered to users in the West.

However, Aldus fears that the $1,200 asking price will prompt widespread piracy.

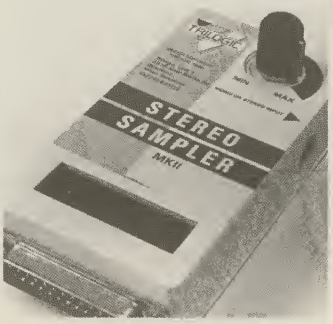
It is estimated that there will be over one million personal computers, mainly IBM-compatibles, in the Soviet Union by the end of this year.

Even more Amiga samplers

There's yet another sound sampler out for the Amiga – this time from well known gadgeteer Trilogic.

The Stereo Sampler II uses a digital converter chip capable of one million samples per second. Trilogic claims that this performance enables high frequency signals similar to those of CD-quality audio to be digitised accurately. There's also a printer through port facility which allows you to connect your printer and sampler at the same time.

It costs £39.99, or £89.99 complete with *Audiomaster II* stereo sampling software. ■



• Stereo sampling from Trilogic.

GFA's Mission Control

There's a new short cut for those ST owners who are having trouble getting around their hard disk.

Called *Mission Control* it comes from well-respected ST specialist GFA. Instead of going through all the tiresome rigmarole of calling up directories and picking a file or program you simply have to link favourite files to a simple keystroke.

It costs £29.99. GFA is on 0734 794941. ■

• MBC: Sanyo launch

Sanyo AT due

Sanyo is to launch a new 286 PC with an introductory price point of £1,000.

The MBC-25 operates at 12.5MHz and comes with 1Mb of RAM expandable to 4Mb. Buyers can choose from either a 20Mb or 40Mb hard disk. There's also the option of a 16-colour monitor with 256K of video RAM.

The machine is to be launched at next month's *Which Computer?* Show at the National Exhibition Centre in Birmingham. ■

Elementary, my dear Watson...

The Home Office Large Major Enquiry System, AKA HOLMES, developed five years ago to scrutinise disparate information to come up with clues in major investigations, is being updated.

It seems HOLMES suffers from communication problems. None of our 54 police forces using it can directly link up with each other and floppies have to be ferried between incident centres to correlate the data. Even then the data can't always be swapped as, in its wisdom, the Home Office used four different equipment suppliers for the hardware.

So HOLMES II is on his way, and is expected to be back on the case by 1992. ■

Cray smashed by RISC shock

The new IBM RISC/6000 model 530 workstation has been found to be capable of performing certain calculations faster than a Cray Model X/MP 4/16.

Research by Massively Parallel Computing Initiative pitted the IBM workstation against the Cray in a standard nuclear reaction test called the Monte Carlo radiation transport benchmark test, and the RISC system ran the test 10 per cent faster than the lightning Cray.

However, supercomputers are still five times faster than microprocessors in running complex, lengthy calculations although the difference is expected to narrow in the next five years.

Microprocessor power has doubled nearly every year for the last four years, allowing them to rapidly cut the computational gap with supercomputer processors. ■

Speak to my PC

BCB Technologies in the United States has announced a system that accepts dictation by telephone and stores it on the hard disk of a PC-compatible computer.

The system can run in the background so the same PC can be used to transcribe recorded speech to a word processor. The Telescribe system is pitched at those who want to dictate memos and letters in the office or on the road.

Units that both record and play back speech will sell for $1,495 while playback-only and record-only boards will be sold for $795.

Contact BCB on 010 1 416 8570790. ■

£199 mouse-cum-digitiser offers best of both worlds

CALCOMP GIVES NEW WIZ TO SOFTWARE

Calcomp, manufacturer of high-end computer graphics peripherals including digitisers and plotters, has entered the mass market with WIZ – a new controlling device that combines the functionality of a six-button mouse with a small 1,000DPI digitising tablet.

"The market we're aiming at is enormous," commented Calcomp's UK managing director, explaining the move at the launch of WIZ. "850,000 PCs will be sold in the UK this year, and up to 40 per cent of users will be looking at alternative input devices."

Designed to replace the conventional mouse on either a PC or Apple Macintosh, WIZ can double up as a digitising tablet, or be used in conjunction with templates to add 'point and click' controls to popular software packages. After placing a template over the tablet and installing appropriate driver software, WIZ can be used to bypass pull-down screen menus and keystroke commands.

Calcomp claim that WIZ users can boost productivity by up to 50 per cent – the template-based control system radically reduces the number of keystrokes that have to be entered to perform common functions.

"We believe WIZ is the biggest commercial breakthrough in input devices since the original mouse," said a Calcomp spokesman, "WIZ is faster, more intuitive and over twice as accurate as the Apple or Microsoft mouse."

• Is it a mouse, is it a digitiser? No, it's WIZ – speeding up input to popular DOS, Windows, OS/2 and Macintosh applications.

Retailing at £199, the package comes complete with cabling, driver software, and a template for DOS on the PC or *Hypercard* on the Macintosh. Additional templates and driver software for over 30 of the most popular applications packages are already available at £45 each, with a steady schedule of additions planned for the range. These colour-coded templates, like the software which interfaces them with applications, have been produced in association with software publishers, and will be upgraded in line with upgrades to the packages they control.

Space is available on the template sheets for users to add their own customised 'one-click shortcuts', and a template building utility is scheduled for release this June which will allow users of the WIZ to create their own bespoke templates from scratch. The program *Template Builder* is likely to retail at less than £50, according to Calcomp's marketing manager, Peter Nice.

The mouse sports a crosshair attachment to aid positioning when WIZ is used to draw or trace outlines; artists with a more traditional background may prefer the £65 stylus available as an add-on. Either way, the device offers a resolution far in excess of the Apple mouse's 72DPI mouse or the 400DPI mouse currently offered by Microsoft for the PC.

Apart from the six switches in the mouse, there are no moving parts to wear or collect dust and dirt – the bane of most mouse users. Positional information is relayed to the computer via a fine electromagnetic interaction between the mouse and a fine grid embedded in the tablet – a technique developed to satisfy the needs of the CAD and DTP markets. Contact Calcomp on 0734 320032■

Amstrad confirms PC 3000 series launch in Germany

Amstrad has confirmed that it is to launch a new range of business computers as exclusively revealed in *Express* five weeks ago.

The company was reported last week to be set to unveil the new models at this week's C-Bit trade show in Hanover. It has yet to be confirmed that the range will be called the 3000 series, following on from last year's ill-fated 2000 series, which attracted bad press when the machines had to be called back to cure hard disk faults.

The new machines will have a 'more robust build' than the 2000 series, featuring metal rather than plastic casing.

In a drive to restore market confidence – already partly successful – Amstrad has uncharacteristically given advance warning that it will be launching a range of 'innovative' products between now and October, including PCs, home computers and video cassette recorders. Sources have already leaked to *Express* that there are plans for new CPC and PPC machines.

• Sugar: Hanover launch expected.

Amstrad stock was said by the *Financial Times* to be "the most heavily traded on the London Option market" last week, with 31 million shares turned over. Some 25m of these were handled by securities house Kleinwort Benson, which increased its profits forecast on the company after visiting Amstrad.

Amstrad's share prices rose 6p to 61.5p during the week of March 17.■

Sega takes the Mickey

Sega has signed a contract with Walt Disney to release Mickey Mouse games.

At present there are no details of release schedules for the games, which will featuture Mickey and his cartoon counterparts Minnie and Goofy.

As part of the new initiative, the company is also to unveil titles based on the exploits of Dick Tracey and Spiderman for its 16-bit Megadrive by this Christmas.

To further boost sales, Sega will be spending $32 million on television and magazine campaigns besides holding 'road shows' across America.

Although half a million Megadrives have been sold since the machine's launch in September, and a further million sales are expected by next year, these figures pale in comparison to Nintendo's game players. 20 million Nintendo consoles have been sold in the US alone. ■

COMMENT

Atari's re-entry into the CD market should come as no surprise, after all Commodore is looking hard at a CD-Amiga...

No one should be too surprised to hear fresh murmurs about CD-ROM technology emanating from the Atari Towers hot rumour network.

Admittedly it is only a fortnight since the company's UK managing director, Bob Gleadow, told *Express* that CD was a field hampered by conflicting standards and a lack of software commitment, but to read this as an outright abandonment of the medium is to mistakenly imagine that one has come to grips with the inscrutable workings of Atari's corporate mind.

If Bob Gleadow can one week incredulously pose to an *Express* interviewer the question "*Is* Compact Disc happening?", then Atari's ingenious PR consultants can supply the 'off-the-record' answer "Yes" within weeks, days or even hours without any overt sign of feeling that they have, between them, disseminated what is an apparent contradiction.

The reason that it is not earth-shattering to find that fresh moves on CD are now being mooted is that for 18 months a stock of CD-ROM devices has languished in Atari's warehouses waiting for its moment to come. It looks as if lack of software has not so much been Gleadow's touchstone for scrapping his existing hardware as a barometer for its eventual launch.

Perhaps the next question to ask should be: what of integrated Atari computer-CD systems? Again, Gleadow writes the idea off out of hand. Again, we may wonder if he is merely waiting for the idea's time to come. Informed opinion sees no great feasibility problem in installing a CD drive in the Mega ST; granted that the Atari technical department has clearly anticipated the marketing side by many months on the stand-alone CD unit, it would be a brave punter who laid money against the boffins being equally in front of the game in this respect.

The remaining question – and a more pertinent one than it at first appears – is when will something more than deliberately circulated rumours actually happen? After all, the 'hard news' announcement that CD is somewhere on the agenda in this week's conference between Atari and software developers does not lend any sense of time scale to the company's plans – not by a long chalk.

It looks as if lack of software has not so much been Gleadow's touchstone for scrapping his existing hardware as a barometer for its eventual launch.

The timing of Atari's Bernard Ingham-esque tease campaign that something or other is going on CD-wise bears closer examination. As Commodore continues with preparations to preview its supposedly top-secret Amiga Compact Disc Console to a wider audience, there can be little doubt that Atari's PR 'spin-doctors' have raised the topic with half an eye on stealing at least some of the arch-rival's thunder.

FROM the ARCHIVE

ONE YEAR AGO

The pared-to-the-bone low-cost Archimedes would take the living rooms of the country by storm, predicted *Express*. Acorn hoped to lure away BBC upgraders from the ST and Amiga with an Archie that was rumoured to cost under £500.

Acorn bosses were "hopping-mad" that the news had leaked before they were ready.

Hacker Nicholas Whitely was banned from using his PC by Bow Street magistrates. He was accused of causing criminal damage to files at Queen Mary College and dishonestly obtaining a licence to transmit computer messages.

Smacked wrists for Commodore as the Office of Fair Trading caught them price-fixing the Amiga. In a letter to dealers, Commodore sales manager Barry Thurston threatened to drop any dealers who advertised the Amiga at less than the recommended retail price. This contravened the Resale Prices Act of 1976 which makes it an offence for a supplier to "impose resale price maintenance on dealers by withholding supplies or discriminating in other ways."

Sega's 16-bit Megadrive console landed in Britain, months before the official launch. Anyone hoping to be among the first to have it had to pay the inflated price of £250 for the privilege.

The Times Educational Supplement confirmed that Acorn and Research Machines held the lion's share of the school cache of computers with a giant 71 per cent between them. "Real world" computers were beginning to make a mark with teachers keen to buy the Amstrad PC. Education authorities weren't so keen and would take some convincing to dump Acorn and RM.

Amstrad was threatening to shoot the market with a light gun for the Spectrum and CPC. The £30 gun would be bundled with six light sensitive games. Rumours of a similar offering from Commodore for the C64 abound.

While most of us were saving up or asking Santa for a 24-pin printer, Epson muddied the waters with the TLQ 4800, a 48-pin dot-matrix printer with an A3 carriage and the price of a laser. For a mere £2,528.85 including VAT you could have a loud and clattery dot-matrix printer. Hmm...

Autoroute, the "road atlas with a brain on a disk" sneaked across on to the ST. This was the program that allowed you to calculate the quickest way between two points in Britain using an Ordnance Survey database. The results could be applied equally to a Maserati, a 2CV or a lorry, and an ingenious print option allowed you to dump your route and details to the printer. For a nominal fee you could get a licence from O.S. to use *Autoroute* commercially .

TWO YEARS AGO

As the cost of RAM chips hit the manufacturers, a lucrative market sprung up among the Arthur Daleys of the computer world and many time-expired micros and minis were disemboweled for their valuable DRAM chips. This led to many small ads for cheap DRAMs and incompatibility as some of the old chips were found to be too slow for the current machines.

THREE YEARS AGO

In a bid to define its split personality, Commodore UK split into business and home divisions. UK general manager Chris Kaday said: "Making these changes, we have banished at a stroke any impression that Commodore is a dedicated consumer company."

Amstrad surprised the educational community by grabbing a goodly part of the Open University micro contract. The OU was establishing a pool of rental machines for students and also organising incentives for students to buy the Amstrad PCs.

Sources: *New Computer Express, MicroScope, Computer Trade Weekly*

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AMIGA

LIFE IN THE FAST LANE

Go on. Give your Amiga the furry dice, Jan Speed turbo-charger, Cosworth Spoiler, go-faster-stripes-treatment with the new 20-CARD processor accellerator from Solid State Leisure.

The 20-CARD, which retails for an amazingly-low price of £399, offers the following power packed features: operates at a full 16MHz (asynchronous design); socket available for the addition of 16 MHz 68881/68882 maths co-processor; space for up to 4Mb of 32-bit RAM (populated with 1Mb, which auto-synchronises with the Amiga perfectly – unlike some other cards).

According to Solid State, the 20-CARD can run Amiga software up to six times faster than a standard Amiga. With the addition of a 68882 maths co-processor, maths-intensive applications are speeded up nearly 40 times! For further info, contact Solid State on 0933 650677.

MIDI MARVEL

Omega Projects has done it again! After the recent release of the successful sound sampler, *Sound Trap III*, the Cheshire-based company has released another new product in the form of MiniMIDI, probably the world's smallest ever MIDI interface for the Amiga.

The Interface consists of a single 25-pin connector (which plugs into the serial port of the Amiga) and two, one metre lengths of lead that connect to the MIDI-in and MIDI-out DIN sockets on any standard MIDI keyboard.

Selling at just under £25, MiniMIDI is also one of the cheapest interfaces available. Not only that, but MiniMIDI is even better value when you consider that you don't have to fork out for MIDI leads – the interface has them built in as standard. So there!

For more info about MiniMIDI, contact Bytes&Pieces on 0253 714141.

THE SOUND BARRIER

AudioLink of Brooklyn, New York, has released the first true 16-bit sound sampler for the Amiga. Badged as a Linear Sound Processor, the unit also offers true 16-bit sampling of the quality previously found only in recording studios.

The unit is sold in the States for $795. Unfortunately, no details are yet available concerning specification, UK pricing and availability – but rest assured that they'll appear within these pages, like soon.

EMULATION SENSATION

DigiMail SRL, of Milano in Italy, has announced the impending release of what could possibly be seen as the most important emulator to make its way onto the market for many years. Yes folks, if you thought the Amiga QL Emulator was earth shattering stuff, you ain't seen nothing yet. The seemingly impossible has been achieved...yes, indeed, the Amiga ZX Spectrum Emulator has no less than arrived.

The Emulator is both software and hardware based and will happily work on both the A500 and B2000 (but not the A2000 for some unknown reason). DigiMail's little wonder consists of a hardware interface that allows the Amiga to load Spectrum programs directly from tape (I kid you not), and then save them straight out to Amiga disks.

The Emulator treats the Amiga drives as Spectrum MicroDrives, thereby saving you from the tedium of having to contiuously load your favourite Spectrum software from tape.

According to DigiMail, the emulator will run virtually all Spectrum 48K software including all popular games titles. Although DigiMail's product does not run quite as fast as a real Spectrum (do any emulators), the emulator features a black and white mode which increases the performance of the emulator to a level that more than matches the real macoy.

Not only do you get a complete Spectrum, but the emulator even includes several extra facilities including a game freezer, Kempston Interface emulation (allowing you to use your Amiga joysticks), full printing capabilities, etc, etc, etc.

Although such an emulator may seem about as useful as a deep freezer in the Antarctic, I'm sure they are many ex-Spectrum owners who had to scrap their software collections when upgrading to an Amiga. For these people alone, such an emulator will be an absolute boon.

The Amiga ZX Spectrum Emulator is available from DigiMail. You can contact the good people on 39 0242 6559. Look out for a full review as soon as my review sample arrives.

MASTER BLASTER

The Amiga sound capabilities are some of the best available on any personal computer. You therefore owe it to yourself to hear those startling sonics in the best way possible. Short of going out and treating yourself to a nice expensive hi-fi, the best thing is Siren Software's Amiga Sound Blaster.

The Sound Blaster consists of a stereo amplifier that connects to the two audio jacks on the back of your Amiga, and a pair of three-way car stereo 'pod' speakers. Although, as said, the Sound Blaster doesn't rival a good hi-fi for conveying the sound quality of your Amiga, the sound it does produce is sharp and fairly clean. Sound Blaster is available from Siren Software on 061-228 1831.

AMIGA SPACE ODYSSEY

Virtual Reality's Amiga astronomy program, *Distant Suns*, recently received an endorsement of major importance. In a letter addressed to the author of *Distant Suns*, Mike Smithwick, space scientist, author of *2001: A Space Odyssey* and avid Amiga user, Arthur C Clarke, praised the product.

Speaking of *Distant Suns*, Clarke said "I'm really boggled – it's beautiful, especially when all the lights are off." He then went on to add "I'm totally awed by what you have done" and "...I'm enormously impressed".

With a recommendation like that, who are we to argue? *Distant Suns* is available from HB Marketing. Phone direct on 0895 444433.

PLAYING TIIP

RAINBOW ISLANDS

Type BLRBJSBJ on each screen in the intro sequence to start the game with an instant pair of fast shoes.
A Hughes, Runcorn, Cheshire

SNIPPETS...

Rumours abound concerning new additions to Workbench 1.4. According to a State-side source, Commodore US is planning to include direct support for AGFA/Compugraphic's outline fonts such as those used by Gold Disk in its successful DTP packages, *Professional Page* and *PageSetter II*. Compugraphic fonts, in case you are not aware, have the advantage of being structured.

After the recent release of the *ROM Kernel Manual: Includes* and *AutoDocs*, Addison Wesley has finally released the remaining two volumes, *ROM Kernal Manual: Libraries* and *Devices*, and the *Amiga Hardware Reference Manual*. Both should be available from stockists soon.

But in the meantime, Blue Ribbon Bakery's long awaited MIDI sequencer *Bars & Pipes* is now available in this country from HB Marketing, who, once again, can be contacted on the sequence of digits that is as follows: 0895 444433.

Jason Holborn

AMIGA GAME of the WEEK

WARHEAD

Activision • £24.99

In the early years of the 21st century, remains of insectoid life forms were found in the vicinity of Sirius. These life forms became known as 'Roaches'. It was calculated that the Roaches' intelligence was based around a collective mind – rather like ants or bees.

However, unforeseen by any of Earth's inhabitants, the Sirians attacked, decimating the planet. And a new defence league was formed to ensure that this disaster never struck again.

***Warhead* places you at the helm of Earth's latest attack ship – the FOE-57. The view from your ship is portrayed by a filled-polygon 3D evironment with heads up displays being called into action when you need them.**

The game begins with you sitting in the hanger of the space station waiting for your first mission. On completion of each mission new orders are transmitted to your ship, giving you a location and general instructions on what to find.

When you have carried out these instructions further messages are transmitted telling you what to do next.

To begin with, the missions deal with the expanding of your ship's weapon and navigation systems – after all it is an experimental ship. Once the systems have been tested, however, you must use them to combat the Sirian forces before they can return to earth and decimate the population once more.

The 3D effect in *Warhead* takes a rather revolutionary view, in that the stars and planets have realistic distances and proportions in relation to your ship. In other words there are no stars flying out from the centre of the screen when you travel – they stay where they are. You move instead.

Special HUD overlays are used to guage speed and direction, making the whole thing more realistic.

Another feature is the use of a fish-eye lens in front of the cockpit so that things can be seen approaching from the sides in a more effective way.

Ultimately then the innovative graphics system is extremely impressive and exciting, especially with the superb sound to back things up. Indeed, the soundtrack is one of the most haunting I've heard in a long time, and it fits the game much better than the usual house-type blast.

But what of the gameplay? Well it's superb! The ship is easy to control and has a wealth of gadgets for you to use in your quest. The missions are carefully planned so that they test your abilities that little bit more than the last, helping you to develop into an almighty space-warrior.

If you enjoyed games like *Elite* or *Starglider 2*, then here is a game which will even turn you away from these classics.

If you didn't like those others, then *Warhead* may be the one to change your mind once and for all!

Maff Evans

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OXFORD STICKS CHESS OUT

A new – and needless to say improved – version of Oxford Softworks *Chess King 2150* is about to be launched. Entitled *Chess King 2175* and selling at £29.95, it features allegedly-amazing opening book control and massively-improved playing strength.

Also bounding from the CP Software stable is *Backgammon Player Professional* and, in a radical departure, *Go Player Professional*. More information than I could possibly convey here may be had, BT willing, by ringing this number: 0993 823463.

EDUCATIONAL EXTRAS

Here's a novel idea. Prisma Software has released an educational package that aims somewhat higher than the usual disk-plus-manual in its attempt to help youngsters learn to read. Children listen to a story read by that fine actress Patricia Hayes; then they learn to read in a software educational game aided by a character called Prof; and finally the same chap appears in five illustrated reading books.

The package, *Prof Plays a New Game* – the first in what is to be a series – is available at £29.99 from Harrods, larger Boots stores and Hamleys. For details of the nearest stockist contact Prisma on 0244 326244.

ALL THIS AND MORE

Where, do you think, can you get a disk of 800K plus, featuring useable demos of new games such as Entertainment International's frighteningly addictive *Pipe Mania*, Rainbow Arts's unutterably-astonishing *Conqueror* and Microdeal's superb new art package *Canvas*?

Where, would you imagine, could you lay your hands on reviews of all the latest releases such as *Midwinter*, *Pipe Mania*, *Rainbow Islands*, *Operation Thunderbolt* and a dozen others? Or an immensely helpful tutorial on the aforementioned *Canvas*, together with page after page of advice on programming, technical matters and software decisions?

I'll give you a clue. It's out now, it costs £2.95, 43,000 make a point of reading it regularly, and it's devoted to the ST. Got it? Of course: *ST Format*'s April issue! Miss it (and they sell fast, believe me) and you'll never forgive yourself.

GFA PATCH UP TROUBLES

Incidentally, for the benefit of John Williams of Brighton, Tony Arnold of Liverpool and many others, the problems encountered on the *GFA Raytrace* demo on the March issue cover disk of the above mentioned *ST Format* were due solely to over enthusiastic program length paring in Germany.

Apologies and red faces all round, and as compensation the next issue (May – available in mid-April) features the full, entire and unadulterated version of *GFA Raytrace*, which normally sells (with manual) for £50. It's an ill wind, etc.

Still, if you absolutely can't wait until then, here's a straightforward patch that should set you right. **Warning:** please do not attempt this patch if you don't know what you're doing, and under no circumstances should you attempt it on the original disk. *Make a back-up first!* Don't you dare write in blaming me for corrupting your valuable Cover Disk.

1) Make a backup of cover disk 8 (the one with *GFA Raytrace*, naturally). If you don't know how to do this you shouldn't be contemplating going any further.
2) Run a BASIC program, such as ST BASIC (if you must), GFA BASIC or Hisoft/Power BASIC.
3) Now type in the following, pressing the Return key at the end of each line:

```
10 open "r",#1,"A:\RAYTRACE\
  GFA_RAY.PRG",1
20 FIELD #1, 1 as a$
30 a$=chr$(0)
40 put #1, &h43a
50 close #1
```

4) Remove the write protection from your back-up disk of cover disk 8 (you mustn't be able to see through the hole on the side of the disk).
5) From within your BASIC program RUN the program (by typing RUN, or in the case of Hisoft/Power BASIC, going to the Program menu and clicking on RUN).
6) Exit from your BASIC program, insert the backup disk of Cover Disk 8 (with the now amended GFA Raytrace program on it) and proceed following the instructions in *ST Format* issue 8.
7) Finally, accept the sincere apologies of *ST Format* and *GFA Raytrace* for the trouble to which you have been put.

Steve Carey

SHOWING OUT

Reader L Ashton of Shrewsbury has written in a high old state of breathless excitement to demand more details on Atari '90, the Show mentioned in this column a couple of weeks back. "Is it all serious stuff, or games as well?" he asks.

It's both, L Ashton of Shrewsbury. Atari '90 gathers together a huge collection of Atari-dedicated software and hardware under one roof – the roof in question being that of the Novotel Exhibition Centre, Hammersmith, London – on Friday to Sunday, June 1-3.

Besides Atari itself there'll be some 60 exhibitors showing latest releases in music, graphics, education, productivity and entertainment software. Great emphasis is being laid on the Mega ST as the heart of 'by far the best value for money professional desktop publishing solutions available anywhere in the world.'

There's also an impressive list of free seminars, user workshops, technical clinics, development seminars and a massive games arcade.

And one extra bonus: admission is pinned back to a very reasonable £2 (£4 for a family ticket).

It'll be good, and I'm sure I'll see you there, L Ashton of Shrewsbury!

SPECTRAVIDEO IN SHOCK MOVE

• *Spectravideo's new joystick: easy to use.*

The ST games playing world was reeling last night at the revelation that Spectravideo is to release a new joystick. 'Stone me,' said one: 'Well I never,' another was heard to mutter.

Even more astonishing is the apparent and somewhat unlikely oversight in the lead department – until one alert hack noticed that the device is in fact an infra-red device.

Distances of up to 30 feet from the ST are claimed, though as yet no solution has been found to the problem of what to do when you lose your joystick (or, in extreme cases, your ST).

Available very soon indeed from all leading computer shops, it costs, simply, £40 – more due to the infra-red than the joystick, if I'm not very much mistaken. Still, anything that reduces the spaghetti effect must be worth a waggle.

ST GAME of the WEEK

SPACE ACE

• Space Ace: *lookin' great!*

READYSOFT/ EMPIRE • £44.95

We've already seen the Amiga game, followed by enticing ST demos, but so far we've seen nothing to prove that *Space Ace* is going to be good on the ST. Now Empire has unleashed the game. Be prepared for one hell of a shock.

Space Ace is undoubtedly the most graphically brilliant game ever to hit the ST. If all cartoon games could have the same kind of effects and lots of playability, computer gaming would reach giddy heights of perfection.

In *Space Ace* you play the part of Dexter and must defeat the evil Borf while at the same time rescuing your girlfriend, Kimberle. There's the plot, now forget it because it's useless.

You have no control over the direction of the game: *Space Ace* is arranged as a series of 33 brilliantly animated levels in which Dexter confronts all manner mayhem. Your only involvement in this nightmare is to make the right joystick moves at the right time. These involve pushing up, down left, right or firing just at the point when Dexter is in trouble.

No more than three moves are required for each scene but get them wrong and Dexter plunges to his death. Make the right move and you progress.

A save game option makes it easy to progress so it doesn't take long to see the entire adventure. Fortunately, although contained on four double-sided disks, *Space Ace* hasn't been restricted to double-sided drive owners – single-sided owners can play too but with only half as many levels.

Graphics aren't just a handful of poorly-animated frames. Each level consists of one still backdrop with the cartoon characters battling for life over the top. It's these characters which make the game so much fun to watch because the animation is smooth, but best of all, the graphics manage to capture the spirit of the cartoon.

But that's the end of the game's demands on your skill. While it is certainly an appealing game to watch, it has little by way of playability.

With each level lasting little more than 20 seconds there just isn't enough to do in the game. On the other hand, *Space Ace* makes an unbeatable demo of your machine and is fantastic to look at.

Mark Higham

Here are a few handy tips for *Space Ace*:

Level One: Move right just before Borf fires at you for the third time. Then move left, then down.

Level Two: As the robots start firing down at you, move down. Wait until Dexter stands on the rock and move up.

Level Three: The crunching arm moves up and down. Move right when the level opens, wait until the arm moves up then move left. When Dexter's hands are on the ground, move left again.

Level Four: Your spaceship flies towards the horizon. Push up before it disappears.

Level Five: Press fire when the trash monster rears up behind you.

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MAN. TALLY	MT-910	10PPM DUAL BIN	2054*
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EPSON	GQ 5000	6PPM	1059*
CANON	BJ-130	INK JET	535
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OLIVETTI	TH-760	THERMAL	525*

(equivalent to IBM QUIETWRITER)

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(As PC 10 SD but includes hard disk drive)

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SPC 6512/2	DD	HD20	1306

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* SPECIAL INTRODUCTORY OFFER ON SUPER 16TE SD MONO ONLY . . . INCLUDES 12" MONO MONITOR £378

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WITH MONO MONITOR
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MINI-PC	HD20	479	593

80286; 8/12mhz; 1mb ram (exp. to 8mb); 7 slots; enhanced keyboard. Includes: 2 serial/2 parallel ports; clock; 1 x 1.2mb drives; hard disk controller; MOUSE, WINDOWS, MS-DOS 4.01, GW BASIC & manuals.

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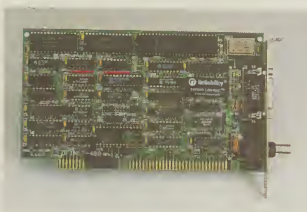

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PC CARD MODEM
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COMPATIBILITY SURVEY

Thanks to all those who replied to the monitor compatibility survey launched a few weeks back in this column. The data's building up and it appears, as I might have imagined, that white on black is the preferred colour scheme.

Seriously, Having combined all the charts returned so far, there seem to be a lot of distinctly dodgy monitors out there. It's hard to believe a PC 1512 is adjusted properly if it can't display bright green on grey.

Also, there seems to be a lot of variation in what's considered 'readable'. I'm not looking for bulk text here, like a documentation file, but sentences for instruction screens, menus and the like. Please continue to run the program, printed in *Express* 67, and send in the results. It would be good to make the final results as comprehensive as possible. Thanks.

NAVIGATING MAGELLAN

Gilli Marsh has sent in a useful macro chain for Lotus *Magellan* which will help if you need to back up large numbers of disks on a regular basis. She claims to have reduced the time for her own back-up – 40 1.2Mb disks – by around 75 per cent.

1. At the C> prompt, change the system date – type `DATE 01.01.80`.
2. Create a `LASTBACK.BAK` file by typing:

```
COPY CON LASTBACK.BAK
```

Type in the current date instead of XXXXXX.

```
Today's date is XXXXXX.
[Ctrl][Z]
```

3. Copy this file onto each floppy. When *Magellan* sorts the files, this file will be the oldest.
4. Change the system date back to the current date.
5. Make a directory called `C:\COPY`
6. Enter Magellan.
7. Set up an index ([Alt][F1]) called 'Files on A', with filespec `A:\*.*` and index name `A:\INDEX`.
8. Set up two explore paths ([F9]), one called 'Files on A' with details as in 7, the other called 'Backup on C' with filespec `C:\COPY\*.*`.
9. Create three macros ([Alt][F7]), as follows:

- [Alt][B] should contain:
  [Alt][F5] [U] [Enter] [Esc] [Alt][X].
  This updates the index and then calls [Alt][X].
- [Alt][X] should contain:
  [Alt][F9] Files on A [ENTER] [F6] TD [Enter] `LASTBAK.BAK` [Enter] [Up] [Alt][F3] [U] [F2] C:\COPY [Enter] [Down] [F5] [Enter] `A:\LASTBAK.BAK` [Enter] [LINEIN] [Alt][F3] [N] [Enter].
  This macro copies all files which have changed more recently than `LASTBACK.BAK` into `C:\COPY`, then amends `LASTBAK.BAK` so it is the most recently amended file on the disk, ready for your next back-up. The program then pauses to allow the source disk to be replaced by the empty back-up disk. Press [Enter] to restart the macro and call up [Alt][C]
- [Alt][C] should contain:
  [Alt][F9] BACKUP ON C [Enter] [Alt][F3] [A] [F2] B: [Enter] [Alt][F3] [A] [Enter] [F3] [Enter] [Y] [Esc].
  This copies all files from C:\COPY onto the backup floppy and then deletes all files in C:\COPY.

Note: If you don't want or need to update the index, start the backup with [Alt][X].

Thanks to Gilli. I'm sure there are ways of speeding backups with other utilities, like TopDOS or even DOS's batch language. If you have developed any you'd like to share with other readers, or other useful utilities – not too specialist – please send them in.

INTERLEAF FROM IBM BOOK

A couple of weeks ago IBM released version 1.6 of its *Interleaf* document processor. The main advantages over earlier versions are in its handling of mathematical formulae, support for grey-scale images, provision for third-party monitors – mainly large A4 and A3 units, and Novell networks.

The program still costs £720 and still needs a 386 machine to run on. It's PS/2-based and is geared to 'knowledge workers' and 'communicators'. Further details from your local 'IBM authorised IBM dealer'.

NEW ELONEX MACHINES

In the 'you heard it here first, folks' department, Elonex is just about to release a 33MHz 386 machine for £2,599. It will have a 40Mb hard disk and 2Mb RAM as standard and will come out on or before the *Which Computer?* Show in April.

This is something of a price breakthrough for a top-speed 386 PC. However, it will probably be overshadowed by the release of the 33MHz 486 machine, again due out at Which?

This latter is an EISA bus PC which will start at under £4,500 for an 8Mb machine with 100Mb hard disk. Also on display will be a 386SX laptop with a 16MHz chip, VGA screen, 40Mb hard disk and 1Mb of RAM for under £2000.

Also new to Elonex is an on-site maintenance agreement which will provide 24-hour call-out cover for Elonex machines. In the first year of ownership, this will cost a measly £30, with a charge of eight per cent of purchase price each year after that. Details on 01-965 3225.

POPCORN POSTSCRIPT

I've lost the number of the gentleman who phoned in response to my request for information about *Popcorn*. Could the gentlehomme please ring again and leave a message about the program in the *Express* office? Merci.

Simon Williams

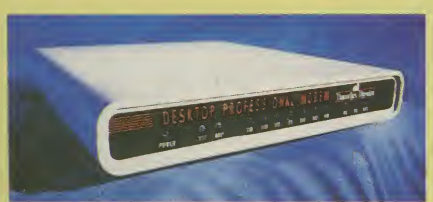
ANAGRAMS COMP

While muddling through the current column, I mused away a couple of minutes on Anagrams of well known PC software products. Did you know, for instance, that LOTUS MAGELLAN is an anagram of L. LOUTS' ANAL GEM.

So another PC column in *Express* instant competition. A copy of a well-known piece of PC software will go to the most amusing anagram on the name of a well-known piece of PC software. You're unlikely to win the piece of software you anagramise, though; ABUSE FORD won't win you *dBase IV*.

Entries in by 10th April, please, to *PC Anagrams, New Computer Express, 30 Monmouth Street, Bath BA1 2AP*. The judges decision is final. Lavatory humour will not be barred, but wit is essential.

4WD MODEM



• *Quadcom: it can connect and it's fast.*

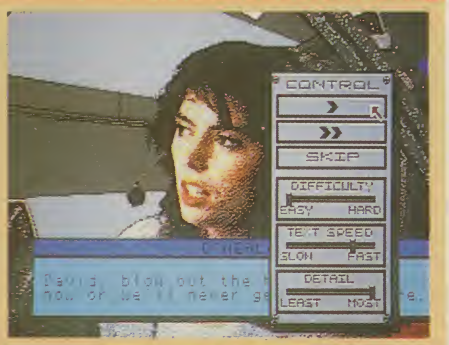
For years Dowty's Quattro modem has been seen in much the same light as its automotive namesake by comms users. Its the kind of machine many aspire to but few can afford, and if you have one you can go anywhere.

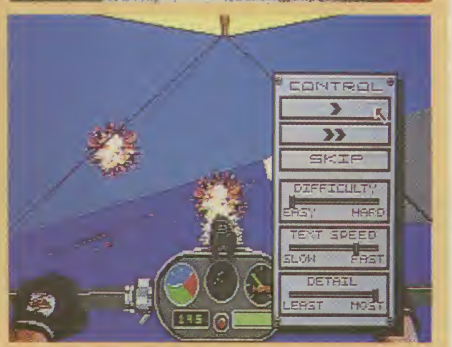
Now Dataflex, who have a hefty chunk of the lower-end modem market, have brought out a rival to the Quattro at £300 less than the Dowty machine. For £499 you get a four protocol desktop modem which supports V21, V22, V22bis and V23 protocols, and has MNP Class 5 error correction while supporting an enhanced Hayes AT command set. It comes complete with *TransSend* comms software and free registration to Microlink and Mercury.

It has a built-in speaker for call monitoring and 13 front-panel mounted LEDs, all flashing away to look really impressive beside your PC.

If you're considering paying this kind of money for a modem, though, it's what it can connect to and how fast it can shift data that really count. On both criteria, the Quadcom scores well. Find out more from the people at Dataflex on 01-543 6417.

PC GAME of the WEEK — DAVID WOLF





Dynamix • £39.99

As Japanese electronic giants swallow US film companies whole and CD-ROM becomes the latest yuppie toy, it is obvious that the worlds of the computer screen and the silver screen are on a collision course. *David Wolf: Secret Agent* is what Dynamix call an 'interactive movie' and could foreshadow things to come.

***David Wolf* combines two elements in an effort to put you in the shoes of David Wolf, a secret agent of the James Bond school. The action is provided by four vector graphic simulations, putting you in control of a hang-glider, a sports car, a parachute and a stealth fighter. All, except the parachute, are heavily armed in typical 007 style.**

The screens use 3D vector graphic landscapes which, with the possible exception of the car chase, look pretty impressive in EGA mode. The flight simulations are reasonably involved too, although nothing like as wide-ranging as Microprose's *F-19 Stealth Fighter*.

The action sequences are linked by a series of still pictures which convey the storyline in cartoon style, complete with pop-up speech bubbles. The pictures were created using live actors and are sometimes quite stunning, but require no interaction from the player at all.

This is the where the game falls down, because once you've been through the whole movie – about three hours set on 'easy' – this whole side of the game becomes redundant and you are left with four diminutive simulators. Quite good value at £10 apiece perhaps, but £40 would buy a single top-notch flight or driving simulator which would keep you busy far longer.

If Dynamix had managed to learn a lesson from modern graphic adventures and introduced some interaction into the movie side of the game, *David Wolf* might have been a name to remember.

Matt Nicholson

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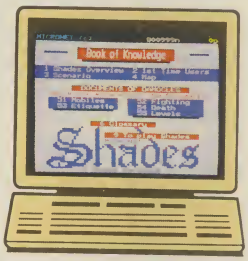

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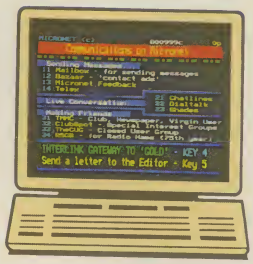

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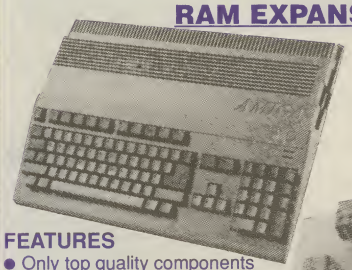

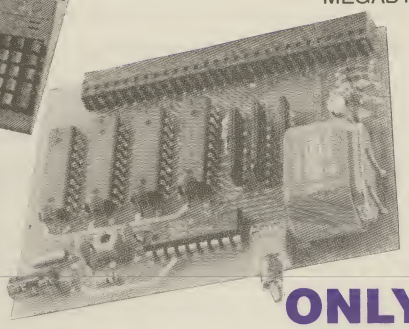

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SPECTRUM

CRACKINGDOWN

The way things are going there's soon going to be no need to enter the choking smoke-ladened atmosphere of your local Arcade to play coin-ops as anything worth inserting a few pounds into will be converted to the Speccy.

The latest arcade game you can play and enjoy in the comfort of your own home is *Crackdown*, a Sega game that good old US Gold has quite successfully shoe-horned into the Speccy. It's a *Gauntlet*-type affair with simultaneous two player action taking place in a plant-view maze complex.

The catch this time is the clause in your hero's contract which says he has to lay a number of dangerous-looking, ticking devices in certain locations conveniently marked with a cross. These are bombs and act as an incentive to finish each level before they go off.

The graphics are a bit on the small side, but smoothly-animated and there's certainly a compelling-edge-of-the-seat feel to the game. Check out a future issue of *Your Sinclair* for the full and, rather well written, low down.

FANZINE SCENE

No sooner do I moan about the distinct lack of Spectrum fanzines than a brand spanking new one rolls hot off the photocopier straight into my possession.

Advanced ZAT Programming is a rather good, if quite strangely titled, mag from Shropshire that comes on recycled trees rather than new-fangled tape or disk.

Despite the title, the first issue's 30 odd A5 pages provide a decent mix of contents with game reviews, tips, comment, programming section and, something that seems to be a regular fanzine feature, an interview with the John Peel of the adventuring world – Mike Gerrard. All this comes as well as a few non-computer related items including comic and CB radio sections and a brilliantly-drawn sci-fi comic strip called *Sentinel*.

The whole thing was put together by a cast of hundreds who, rather annoyingly, seem sickeningly multi-talented with the resident artist being particularly impressive. All in all, it's professionally laid out, good first issue and well worth the insignificant sum of 60p and a stamp to send away for. Get your copy from PO Box 488, Tweedale, Madely, Telford, Shropshire.

A POKE FOR A POKE

Here's another piece of info which goes to prove that Speccy owners are unselfish, generous and obvious role models for the rest of society.

Keith Campbell of Belfast has written to tell me about the world's first poke exchange scheme which he's just founded and wants lots of Spectrum owners to make use of. The idea is simple enough and deserves your support – you send Keith a poke for any game and receive in return another poke. Best of all, the exchange rate is nothing.

Details: send SAE to Poke Madness, 18 Deacon Street, Belfast BT15 3EG.

ARRRGH!

I made a mistake in my column in *Express* 69. In my review of issue five of the *Enigma* on-screen mag, I stated that Plus 3 disk versions were available from Garner Designs (57 Lovers Walk, Dunstable, Beds LU5 4BG) where as, in fact, they're not.

Enhanced Plus 3 version of issues three and four are, indeed, available from Garner Designs for £3.50 but, from the current issue on, *Enigma* comes on tape with an option to transfer the issue on to Plus 3 3-inch disks.

Send £1.99 for the tape version of *Enigma* to 15 Westfield Road, Inverurie, Aberdeenshire AB5 9YR.

Robin Alway

POKETY POKE

A jiffy load of multiface pokes and a cheat for *Chase HQ* have just been slipped to me by Ashley Price of London, along with a note suggesting that I don't send him any kind of reward. So I've done just that and forwarded him absolutely nothing.

All Ashley wants, the undemanding chap, is a mention for his CV printing service. If you want a nice, neat-looking, 100 per cent coffee-stain-free CV that's sure to bag you that dream job in McDonalds, send an SAE and relevant details to Ashley Price, 13 Vectis Road, Tooting, London SW17 9RF. And remember to thank him for supplying the following hacks, won't you.

For *Chase HQ*:

From the menu, choose the 'Redefine' keys option and select the following keys: S,H,O,C,K,E,D, ENTER (for turbo). You'll then be presented with some more options. Take a note of these and then press any key.

Redefine the keys again to your own choice and then start to play. In the top left hand corner of the screen you should notice the word TEST. Now you can select one of the option numbers.

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PCW

PRICE ISN'T RIGHT

In case you missed the news the other week, PCWs are all going up by £50 because Amstrad says it isn't making enough money.

Hmm; not good news, but the silver lining to this cloud is that it shows the machine is still selling.

The evident good health of the market must, to follow the logic on, be good for the future of the software base and particularly for *LocoScript* users: expect more utilities.

BIBLE HASHING

Your typical PCW owners as described by Locomotive, creators of *LocoScript*, are 'vicars and journalists' – two classes of folk with few common denominators, you would have thought. (Imagine the mess the Bible would be if journos had written it: SATAN SLAMMED IN APPLE FIASCO – We were duped, claims couple from Eden.)

Anyway, a frequent request by the former group is for access to the Good Book on PCW disk. PCW World can supply the Old and New Testaments on 11 disks for £32.45. Details from PCW World, Cotswold House, Cradley Heath, Warley B64 7NF.

The New Testament is also available in a brand new 'hashed' version by the Bible Society of Scotland who, with the parsimony traditionally – if unfairly – associated with their race, have condensed it in a special version that's economical on memory.

Moving on (*quite rapidly – Ed*) there are also special features assisting Bible study enabling you to search for particular words or phrases. Details from the good people on 031-337 9701.

PUZZLE TIME

Think some of your files get too big to be worked on comfortably? (10K is a sensible limit). In the course of preparing a book recently I had to deal with a 350K text file in *Protext*.

The problem was, the file was so big, I couldn't split it up into smaller chunks – whenever I tried to cut bits out of it, or save a block or anything, the PCW crashed. The limit of what I could do to the file once loaded was move around it and add a couple of lines here and there. Eventually I succeeded in splitting it up into smaller files.

Protext buffs may like to work out how; answer next week.

CLING PEACH OF A TIP

Sounds like a tip from *Viz* comic but it isn't. Plain, old ordinary kitchen cling film is useful to protect your keyboard from dust, dirt and coffee spills, costs nothing, and is just as effective as the custom-made covers that are currently on offer.

It can also be useful if you use the Cyrillic, Greek or Symbol 'super shift' character sets in *LocoScript 2*:

Place the cling film on the keyboard and then put a small circular sticker, available from most stationers, over the relevant keys, with the 'super shift' letter or symbol written on it. This will mean that there is no need to mark the keys in any permanent way.

Rob Ainsley

MSX

FEEL THE POWER

Recently, I received a copy of *Power Graphics* for the Memotech, MSX and Einstein computers. This is a book (or should I say booklet) which sets out to provide a suitable Z80-based graphic kernal for the VDP, which is common to all three computers.

The book is produced by a company called AFW Software, 24 Blenheim Place, Stirlingshire, and is, frankly, not of use to the serious MSX programmer, someone who already has a good understanding of machine code and already has a little knowledge of the Texas Instruments TMS 9918/19/29 compatible graphics chip.

I don't know if the copy I received is a production version of the manual – I sincerely hope not, as I found that 21 pages of A4 paper held together with a plastic clip a little on the amateurish side. This opinion is based on the asking price of £8 per copy, or £7.20 if you quote *Express* when ordering.

Not being a genius when it comes to machine code on the Z80, I found that, frankly, this booklet was either way over my head, or badly written. The introduction explains that the writer has not included too many graphic commands as the best way to learn is to have hands on experience.

I think, though, that he has assumed too much of the reader, and should have included introductory pages on the workings of the VDP and how the machine code listings included in the booklet – all of them in machine code – are mostly subroutines. You are expected to have enough knowledge to write the main body of the programs yourself.

This is certainly not a book for the novice. And when you compare *Power Graphics* with a book like *Behind the Screens of the MSX* by Mike Shaw, then the latter proves to be a much better prospect. It is still available from K-Soft computers of Retford at only £6.95.

PSSST, BUDDY

Brace yourselves folks, here are the MSX Shadow Weaver's tips and pokes I promised last week (at least some of them, that is).

Firstly for the game *Turmoil*, load in the game by typing `LOAD"CAS:"` and when the OK prompt appears, LIST the header. Delete the ,R at the end of the line, then type in the following:

```
10 POKE &HE0CI,&H00
20 DEFUSR0=&HE646:I=USR(0)
```

RUN this and you will obtain infinite lives.

For the *Price of Magic*, RAM save the game by typing in the following...`am save`, (miss out the letter r in ram).

Now retype `"ram save"` and press RETURN. When you next get killed type `"ram restore"` and you will restart the game where you died, and have 256 starting points.

Thanks for the tips, Mr Shadow Weaver, I suppose you would like a free game for all your efforts, so if you send in your address I will probably ignore it (but you never know).

Next week there will be news of a supply of RS232 interfaces for the MSX, and also details of the availability of a range of Japanese cartridge games for the MSX 1 and 2 computers.

Keith Neal

CPC

LITTLE WHISPERS...

Psst! – wanna hear some rumours? I bet you do, because they're about the new CPC console. It looks like the machines will not only feature those juicy hardware enhancements already speculated on in *Express*, we can also look forward to a complete restyling job.

And if you want even more rumours, it seems the French CPC mags already know a little more about the new machines than we do. In fact, the press over there has already had a sneak preview of what the new machines can do and they were mightily impressed.

You want more? Well, a little bird has whispered that the Queen's been on the phone to Amstrad all week after a review machine, but we have to stress that we've got doubts about that one...

IN WITH A BANG

Well, it was a long time coming, but *X-Out*, from Rainbow Arts, is finally here...

It's a game that promises to do for the CPC what *Blood Money* did for the 16-bits – a graphically excellent shoot-'em-up with added gameplay. In both cases this consists of the ability to enter a 'shop' and stock up on all manner of firepower with the loot you've amassed from wiping out baddies.

In *X-Out* you get to do this at the end of each level in preparation for the next – and even more vicious – blast through the murky deep.

You see the game is set not in the usual intergalactic void/post-nuclear urban ruin/alien-infested space station, but far beneath the waves, over a gloomy, slimy, oozing sea bed riddled with caves and channels containing all manner of violent creatures.

Before you even dip your ship's toe in the water, though, you visit the munitions shop. Here you can choose from four different ships.

The most powerful are – needless to say – the most expensive. On the other hand, if you choose a cheap one that leaves you with more dosh for arming it. The choice is yours.

Your ship responds rapidly to joystick input, and it needs to because your enemies race across the screen like nobody's business. The programmers have done an excellent job, in that even when it seems the screen is filled with nasties, there's no trace of slow-down.

The shooting part of the game follows the by-now inevitable format. A series of levels, each of which features a huge and ghastly end-of-level guardian that takes about 2.5 million shots in exactly the right place to destroy. If you've armed yourself properly in the first place, it only takes you about 15 seconds to fire that many shots anyway.

The graphics might be stunning, but there's no soundtrack, and the spot effects sound just like those from a hundred other standard shoot-'em-ups. But then you can't have everything.

Another minor niggle is the sprite detection – or lack of it. It's simply quite difficult to tell when you've landed a shot on one of the bad guys.

With the waves of attacking aliens that form the bulk of each level that doesn't matter too much – if you hit 'em they disappear, and that's that – but with the larger mid-level guardians and even larger end-of-level versions, there's no way of telling when you've hurt them.

You have to just sit there, piling in the shots (like George Orwell in *Shooting an Elephant*) and hope for the best.

Third and final niggle is the energy bar at the bottom of the screen. It's only about a pixel wide, and trying to see what shape your ship is in while trying to fight off yet another flotilla of mutated crustaceans can be tricky.

Nevertheless, judged purely as a shoot-'em-up, *X-Out* is exceptionally fast and very pretty.

Add the extra dimension of the shop sections, and you've got a tough, but excellent game.

Rod Lawton

CLASSIC ARCADIA POKE

Remember *Classic Arcadia*, that budget gem featuring three arcade hits of yesteryear? Well, if you're still finding even these prehistoric outings too tough, here's a tape poke for infinite lives on all three...

```
1 ' Classic Arcadia - tape-
2 ' By Graham Smith
3 ' Infinite lives
4 ' Method 1
5 '
10 a=48640:MODE 1
20 FOR j=0 TO 63:READ a$
30 x=VAL("&"+a$):y=y+x
40 POKE j+a,x:NEXT j
50 IF y=7009 THEN CALL a
60 PRINT"data error
70 DATA 06,00,11,44,44,cd
80 DATA 77,bc,eb,cd,83,bc
90 DATA e5,cd,7a,bc,e1,3e
100 DATA 01,bc,20,08,01,af
110 DATA c2,ed,43,e9,09,e9
120 DATA 01,2c,be,ed,43,ca
130 DATA 00,0e,38,ed,43,12
140 DATA 74,e9,af,67,6f,32
150 DATA 21,54,22,22,54,c3
160 DATA 00,42,3e,b7,32,8d
170 DATA 38,c3,00,20
```

C64

PUBLIC DOMAIN

I'm all in favour of properly run libraries of public domain software, as they are such a useful source of programs for what are usually very reasonable prices. A new one that has recently appeared is run by a chap called Mark Firman, who charges £1 per disk or £9 for 10 disks.

A catalogue disk, detailing just what is available, can be yours for a mere 90 pence. This will show you that the library covers all sorts of 64 software. Mark has got about 30 disks at the moment and hopes to add at least five a month – more if he gets the support from you. So have your pens and papers at the ready because here comes the address: 11 Denmark Drive, Sedbury, Chepstow, Gwent NP6 7BD.

MORE POKES

Another four for you this week, starting with *Bubble Bobble*. If you `POKE 7076,70` then players get points and lives when you burst a bubble, and if you `POKE 8975,70` then both players turn into the enemy when you press fire.

For the game *Hawkeye*, try `POKE 7468,173: POKE 6105,189: SYS 23558` for infinite lives.

On *Traz-64*, you can `POKE 42200,173: SYS 32768` for unlimited bats.

Finally, for this week, on *1 Ball 2* you can `POKE 38861,76: POKE 38862,210: POKE 38863,151: SYS 2050` for infinite lives. Keep sending those pokes in, don't forget!

ADVENTURE HELP

It's nice to know that someone else is stuck in the same part of Infocom's *Starcross* adventure that I was baffled by for a good long while. The problem concerns getting the blue rod from the globe, and as John Ryan, of London, told me what to do, I can tell Paul Whyte, of Oxford.

You have to put the red disk on the floor and the blue disk under the globe. Put the gun on the globe, and then turn the dial to 4. Voila! The blue rod is yours, and you can get the gun and red disk as well before turning the dial to 1 to get the blue disk back. Phew!

HOMEWORK HELP

Not all of us are studying for mathematical exams, but for those who are, or for those who are parents of such students, a company called Insight Software is here to lend a helping hand. A 38K program to take the strain out of coping with all the horrors that sometimes lurk within the world of mathematics is on offer at £5.99 on disk or £4.99 on tape, and the address to write to for further details is 7 Great Calcroft, Defford Road, Pershore, Worcsestershire.

HERE COMES SUMMER

It seems that MicroProse has arranged to produce a follow-up to the highly-successful *MicroProse Soccer*.

World Soccer will be a mixture of 3D action and strategy gameplay. Some of your team-mates will even be intelligent, in that you can pass to a computer-controlled player, run into a better position yourself, and have him pass the ball back! A summer delivery is on the cards.

Pete Gerrard

YOUR FORMAT

AMIGA 10
ST 12
PC 14
Spectrum 18
PCW 18
MSX 18
CPC 19
C64 19
Atari XE 20
QL 20
Archimedes 20
BBC 20

QL

BY VALUE OR BY REFERENCE

If you are translating SuperBASIC programs into another language, or translating a program in another language into SuperBASIC, you need to know about the distinction between 'call be value' and 'call be reference'.

This topic is touched upon in the Concepts section of the QL User Guide, but isn't made very clear, and there are no examples provided.

SuperBASIC, in common with other BASICs and FORTRAN, handles function and procedure parameters using 'call by reference'. That is, the parameter can be altered by the function or procedure, and the altered value is available to the rest of the program.

A simple example should make this clear. Suppose we wish to swap the values of two variables (as part of a sorting routine, Perhaps). The following SuperBASIC procedure will do the trick:

```
DEFine PROCedure swap (x, y)
temp = x: x = y; y = temp
END DEFine
```

If you call the above procedure, using the following code:

```
x = 1: y = 4
swap x, y
print x, y
```

you will see 4 1 printed: the variables have been swapped. If you replace 'swap x, y' with 'swap (x), (y)', converting the variables into expressions, you will find that the swap procedure no longer works. This feature is useful if you don't want a procedure to affect the value of variables with the same name as its parameters elsewhere.

In a language like C, that employs 'call by value', this technique won't work: the values of the variables in the calling program won't be swapped, and will remain unchanged. This problem can be overcome by passing pointers to the values to be changed, to the called procedure.

QUANTA WORKSHOP

The QUANTA workshop which took place in Portishead, near Bristol, on Sunday, March 4, was a great success, with an attendance of about 370.

A seminar area for presentations by traders, with comfortable seating, was in use for much of the day. Outfits attending for the first time included DiRen, with its Fleet Tactical Command simulation, and Jochen Merz, from West Germany, well-known for his addictive *Brain Smasher* game and his QPAC/QRAM-compatible utilities.

BUILD YOUR OWN BRAIN

I've translated a neural networks program I came across recently into C and got it working on the QL. I'll be placing it in the QUANTA library for those of you who might want a copy.

John Torofex

BBC

THE 4TH DIMENSION

Nevyron, from 4th Dimension, is a fast, sideways-scrolling, arcade shoot-'em-up. And that really ought to be it; nothing to distinguish it from many others in the same genre.

But, as the game is from 4th Dimension, there are some thoughtful touches. It is quite clear that the company has decided on a policy of catering to all users, and not just the teenage games freak with super-fast reflexes.

You can specify speed, sound volume, difficulty level and starting level right at the beginning. You can even change the mode the game runs in – very original!

Indeed, the gameplay is quite challenging, although straightforward in nature. You must win through to the end of each level, destroying aliens as you go, to acquire more firepower.

On completion of a level, you get a password which is used to re-enter that level directly. This all helps less advanced games players, such as myself, but the more macho types needn't worry, the manual points out that the only way to properly complete the game is all in one go!

Other news from 4th Dimension includes a conversion of the Archimedes game *E-type*, and a 3D arcade strategy game due out in June called *Inertia*. So, together with recent announcements from Superior, things are looking good for the BBC games market.

THE GUIDING LIGHT

On a slightly less upbeat note, I see that Richard Hanson, until recently the guiding light behind Superior Software, has decided to leave the BBC games industry completely.

Indeed, I gather he has gone to America – whether permanently or not, I am in no position to say. However, my best wishes go to him in whatever his new enterprise is.

I am sure, however, that Superior will continue much as before in the hands of his brother, Steve.

Not only do people have brothers, but so, too, does computer software. Take the Cambridge computers Z88 for example. The multi-purpose *Pipedream* software supplied with the machine is actually a distant relation of the *View* word processor.

Let me explain; in the beginning was *View*, and it was good (but not that good). And, in time, *View* begat *View* 2.0 and begat 2.1 and 3.0.

But there came to pass an era of miracles and change, and, hey ho so arrived *View Professional*, which was not really *View* at all.

And in truth its siblings were all called *Pipedream* (though they were not all the same either).

Many moons then passed before a bald-headed chap with a ginger beard looked into the problem and said: "You shall sit on my lap, and the laps of many others in my little black computer."

So endeth this chapter. But, so too begins the tale. And the full story from beginning to end is but partially told.

Andrew Brown

XE

THE BUG

Bitten by the comms bug, you now need equipment to go on-line, right?

The first thing to acquire is a RS232 interface. Back in the early days of home computing, many manufacturers didn't bother to add standard interfaces to their computers, instead locking you into buying their peripheral products.

Atari was no exception, and the XL and XE machines have a hybrid serial port that cannot be connected directly to a modem. You can attach Atari's own modems, but as they only support Bell tones (the communications protocols adopted by the American phone company) they're useless. You need an interface that will convert the 8-bit's serial port to a standard RS232 outlet.

In order to silence critics of this 'non-standard' policy, Atari launched the 850 interface. A little box which provides a parallel port and a couple of serial ports, the 850 is an excellent interface but rather expensive (around £55 try ComputerHouse on 01-731 1276). It will, however, enable you to connect the 8-bit to any modem, parallel or serial printer.

An alternative to the 850 is ICD's P:R:Connection, an interface offering the same specs as the 850 but priced at £69.95! If you've got money to burn contact Frontier Software on 0423 567140.

But by far the best option is to buy Daniel Bruen's (of Bruen Enterprises 0831 166429) RS232 interface and Bobterm software. This supports all modems and speeds and costs just £25 – cheap! Whee!

Edmund Blake

ARCHIMEDES

IMPRESSION - NEXT STEP

I've been in touch with Computer Concepts over the printing problem I was having with *Impression* last week. After suggesting that it might be my printer, or the parallel lead, both of which I'd tested before ringing, they admitted that it could be a faulty key. "Would I return it for a replacement?" they asked. "Yes," I said, and did. Haven't had a replacement yet. I'll let you know when I do.

MULTI-TASKING MINUS

The Archimedes is still not fulfilling its design as a true multi-tasking machine, as little of the software is happy to run within a RISCOS window alongside other applications. We are, of course, beginning to see true RISCOS applications, *Acorn DTP* and *Impression* being two which can multi-task with others – but most either take over the whole machine, or a complete display screen.

This is due in part to the complexity of writing to Acorn's specifications. Utilities like *Archway* can help to handle the WIMP interface itself, but there are some fundamental difficulties that are not easy for programmers to handle. This is particularly true of those people who have moved up from the relative simplicity of the BBC environment.

In some ways this harks back to the early days of the Amiga, when applications from a variety of sources didn't quite understand how the OS worked and caused the machine to fall over much too regularly.

Part of this 'crashing' problem was also the multi-tasking environment itself, though. The Arc operating system is pretty solid – witness how few applications programmers complain about it – but it does still take time to understand and produce weighty applications for.

Be sure they're coming, though, even if the long wait pulls scorn from Amiga owners everywhere!

CONQUEROR REVISITED

I've read several reviews of the ST and Amiga versions of the tank game *Conqueror* in the last week or so, so I thought I'd take another look at the original, released last year on the Arc.

It was overshadowed by the success of *Zarch*, David Braben's spectacular 3D space shoot-'em-up, because it uses the same scrolling landscape. In *Conqueror*, of course, you rarely leave the ground. If you do, it's in bits.

The basic idea of the game is to trundle around rolling fields on the prowl for enemy tanks. You need to avoid the country cottages, which stop you moving, and sneak up on the enemy for a good blast.

The cute villages – perhaps modelled on the parts of West Germany where NATO tanks periodically rip up the potato harvest – do sometimes get in the way. They then have to be taken out.

But I'm sure the good residents of Conquerorville realise it's all part of the game, and at least the tank tracks in *Conqueror* slowly vaporise entirely of their own accord.

Then again, it is something of a shame that Superior Software/Acornsoft can't produce a few other Arc games to keep these two company.

When the flagship games house seems to have abandoned the machine, it's not that encouraging to others that might be tempted by the market.

Bertrum Carrot

FONT FOUNDRY FONTS

The fonts finally came from the Font Foundry and they do look very good. They're easily installed, as are all Acorn-format fonts, by copying them into the !Fonts directory, where the Font Manager finds them automatically.

Running *!Edit* and with the fonts menu open, the menu then displays every font installed and you can incorporate them straight into a document. They're well anti-aliased and look good on screen, though of course they show up better on a higher-resolution screen.

When it comes to printing, it's a different question. Though the fonts do print out, the output from my LaserJet II is very bitty. It is almost as if it is somehow using a draft only mode, or printing at a scale of less than 100 per cent.

I'll have to look deeper into this, as the product's manual and price list, printed on a Canon ink-jet printer, is considerably better.

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WORD PROCESSORS

● PROTEXT

Arnor 0733 68909
£99.95
It's fast and easy to use – has a good spellchecker and even has a calculator built in for doing tedious sums. Text can be viewed in WYSIWYG mode too. Keyboard can be configured to execute a stream of commands at the press of a key.

▲ Word count, many block commands and calculator
▲ Powerful spellchecker
▲ Can work on two documents simultaneously

▼ Not beginner-friendly

● KIND WORDS

Amiga Centre Scotland 031-557 4242
£49.00
Produces the best printer output of any word processor on the Amiga thanks to special output modes which simulate near letter quality. Has lots of good printer drivers to exploit even the most simple of printers.

▲ Excellent printer output
▲ Graphics can be imported

▼ Lacks a word count unless you spell check

● SCRIBBLE

HB Marketing 0895 444433
£99.95
A simple to use word processor with spell checker and mail merger. Reformats text as you type. Although it lacks graphical functions, its simplicity makes it an excellent word processor.

▲ Simple to use
▲ Mail merge and spell checker

▼ Can't import graphics

● WORDPERFECT

Sentinel
£293.25
A hefty 500 page manual teaches you how to use *WordPerfect*. A huge spellchecker dictionary and a thesaurus add to the bundle. Can call up a command line interpreter from within the program.

▲ *WordPerfect* is used on many machines so it's useful if you're familiar with it

▼ Expensive otherwise and lacks graphical commands

SPREADSHEETS

● SUPERPLAN

Precision 01-330 7166
£99
Comes complete with a tutorial disk to help get you started – all the functions you're likely to need in a spreadsheet and also has excellent graphics display which makes data more digestible

▲ Macro language allows keyboard configuration
▲ Plenty of graphics functions
▲ Good find/replace database facilities

▼ Requires 1Mb of memory
▼ Awkward to use because of poor use of menus

DATABASES

● SUPERBASE 2

Precision 01-330 7166
£99.95
Simple to use, even for a beginner. Data can be imported from other files easily. Excellent data validation and useful help messages can be included. Mail merge facilities.

▲ Excellent tutorial files
▲ Graphics can be included and saved with the database

▼ Not cheap

● SUPERBASE PROFESSIONAL

Precision 01 330 7166
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The most powerful relational database available. Designed beautifully so that setting up a database is simplicity itself. Also incorporates a 200 command word programming language.

▲ No limit to field size or number of records
▲ The Rolls Royce of databases

▼ Even less cheap

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Produces PostScript compatible files for use by laser printers and typesetting bureaux – can also produce colour separations. English, French and Spanish dictionaries in the spellchecker. Five magnifications including life size and 200 per cent. Probably the best and most sophisticated DTP package on the Amiga.

▲ PostScript compatible files
▲ Colour separations can be created
▲ Three dictionaries

▼ Requires 1Mb of RAM
▼ Two drives strongly recommended

● SHAKESPEARE

Cloudhall Ltd 0604 231 2111
£99
Clear and informative manual. Produces colour pages directly on colour printers. Has some problems with large documents so best used on single pages. Graphics can be imported and each retains it's palette. PostScript compatible.

▲ Ideal if you have a colour printer
▲ IFF file import

▼ No magnify function
▼ PostScript output is only in grey scale
▼ Graphics can't be edited on the page

● PUBLISHERS CHOICE

HB Marketing 0895 444433
£99.95
A combination of three programs: *Pagesetter*, *Laserscript* and *Kindwords*. The latter is a word processor with both a spellchecker and thesaurus – just in case you get lost for words. *Laserscript* is a utility for converting *Pagesetter* files to PostScript format and printing them. *Pagesetter* includes a mini graphics package to help the page creation process. Excellent manual.

▲ Includes powerful word processor – *KindWords*
▲ PostScript compatible
▲ Graphics capabilities in Pagesetter
▼ Font and hyphenation information not imported with text

➤

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REPAIRS FOR AMIGA AND ATARI

● CITY DESK

Precision 01-330 7166
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A very powerful DTP package, but suffers a little from unfriendliness. Style codes are imported when the text is. Includes a simple graphics editor which can be used to create or edit IFF files for use on the page.

▲ PostScript output is supported
▲ Text can be edited on the page

▼ Lacks a WIMP environment

● PAGESTREAM

Silica Systems 01-309 1111
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Text can be flowed around graphics in most DTPs, but *Pagestream* has the edge in that respect – text can be flowed in many ways. Magnification is not limited to five sizes – you can work at virtually any magnification.

▲ Flexible text flowing
▲ Large and easy to edit spell check dictionary

▼ Difficult to produce colour separations

GRAPHICS

● PHOTON PAINT 2

Microillusions 0703 703030
£89.95

Art package capable of producing HAM images. Comprehensive set of tools allowing re-scaling, flipping, rotation, bending stretching and much more.

▲ Wide range of tools for image manipulation

▼ But some are very slow to use

● DIGIPAINT 3

Newtek/Precision 01 330 7166
£69.95

HAM art package with facility to create images up to 1024 by 1024 pixels – the only limitation being memory. Good text entry system which uses a buffer. Text is manipulated before it's put on screen as a brush. Friendly interface between package and user

▲ Good text manipulation
▲ Huge images possible

▼ No fill or airbrush
▼ Awkward magnify mode

● DELUXE PAINT III

Electronic Arts 0753 49442
£79.95

Excellent art package that allows use of full overscan and extra halfbrite screens. Simple animations can be created too – very easy to do. Stencil mode stops you from accidentally airbrushing over the wrong part of the screen.

▲ Perspective fill
▲ Halfbrite Mode
▲ Full overscan screen

▼ 1 Mb required
▼ HAM not supported

● FANTAVISION

Domark 01 780 2222
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Uses polygons to create animated objects and relies on tweening to create the illusion of movement. Full colour IFF files can be imported to make up the background scenery.

▲ Fast animated sequences that don't eat up much memory
▲ One object can be easily transformed into another

▼ Objects are silhouettes

● MOVIE SETTER

HB Marketing 0895 444433
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Uses a series of sprites to create animations which are more cartoon like in nature than Fantavision. Sprites can be brushes created with most art packages – they're in IFF format. Storyboarding makes it easy to use and see what's going on. Animation can be played, rewound and stepped through frame by frame.

▲ Minor changes to productions can be viewed instantly
▲ Sound is easily integrated

▼ Works best with 1Mb
▼ Eats up memory if not careful

● PIXMATE IMAGE PROCESSOR

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Allows pictures to be transformed from one form another – HAM can be reduced to 32 colour pictures for example. Images can be cleaned up, defocused, squashed or stretched.

▲ Converts images from one format to another
▲ Wide range of cleaning options

▼ But who the hell distributes it?

● X-CAD

Commodore 0628 770088
£199.95

Very fast re-drawing of images. Has great potential in the range and qualities of images that it can produce. Hardware requirements mean that you must be very serious about your CAD to justify buying it.

▲ Best CAD package available
▲ Fast
▲ Comprehensive

▼ Needs 2Mb
▼ Better with hard drive

● INTRO CAD

HB Marketing 0895 444433
£59.95

Extensive colouring routines enable realistic and detailed objects to be created. Easy to include text too. Ideal as an introduction to CAD

▲ Simple to use and much cheaper than X-CAD
▲ Excellent results can be obtained with a bit of skill

▼ Not as comprehensive as other packages

● SCULPT 4D

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▲ Easy to use

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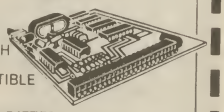

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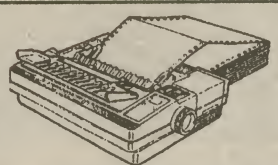

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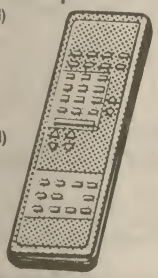

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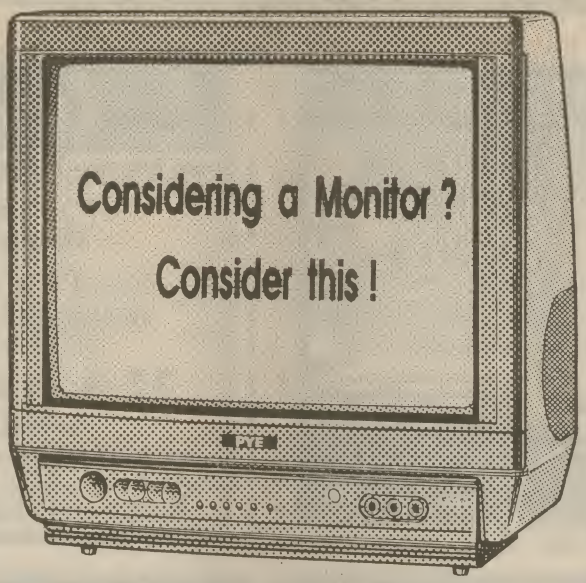

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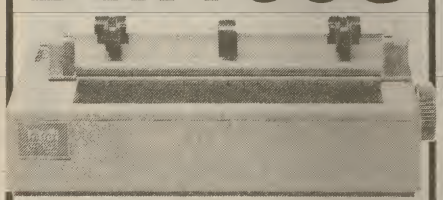

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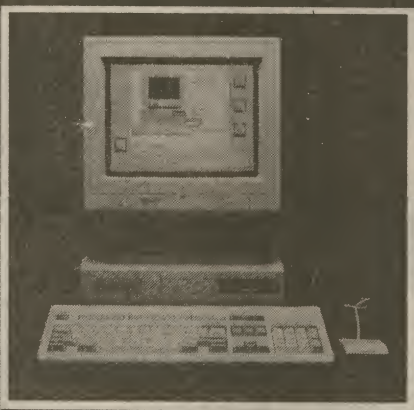

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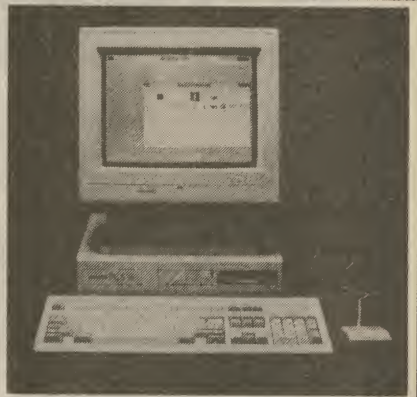

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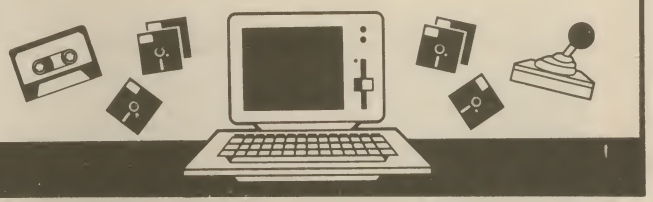

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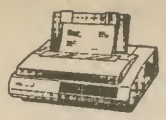

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TECH TIPS

HELP! No MSX!

I am currently considering buying a new computer. I last got my fingers burnt when I foolishly paid £300 for a Sony Hitbit MSX at its launch in 1984.

Having been a regular reader of your learned journal and listening to the various debates, the obvious choice would appear to be the Commodore Amiga (main use: games and a little word processing). However, do you not feel that the Amiga has been out now for so long that it has come to the point where its update must be due to appear?

There are also mentions of a 32-bit Commodore and the opportunity for a company to produce a more realistically-priced Archimedes clone. If the STE is the best that Atari can come up with then they can be discounted from the running.

If you had six months to wait before purchasing would you wait for the machine of the 1990s, or do you think seriously that the Amiga here and now is the machine? Like my previous experience with the MSX, I do not want to spend £400-plus only to become embittered with it within the year.

I appreciate there is always a risk involved with new products, and I am sure that the first purchasers of the Amiga on its release are feeling somewhat smug now, but I have a suspicion that 32-bit machines will dominate the 1990s.

Jim McAreavy, Dumfries, Scotland.

Sure, and we'll all be using personal atom transporters, taking advantage of inter-planetary holidays and taking but one food pill per day thereby cutting out time wasted eating conventional food, but that didn't stop you from buying a new car, holidaying at Scunthorpe and eating egg and chips for lunch, right?

Listen Jim, you want a computer and you have the money – so go buy a computer. On today's market there are currently two choices in the 'games/bit-of-word-processing' category, Commodore's Amiga and Atari's ST. Both are quality computers with excellent hardware specs and more software than you can shake a silicon stick at. Both are reasonably priced and come bundled with software bits and pieces which will get you up and running quickly. Both have tremendous support and will continue to have this support for many, many years to come.

As you've already examined the Amiga, perhaps that is the machine to plump for. Forget this 'six months' nonsense. Go to your local computer store tomorrow and buy the machine – you won't be disappointed.

HELP! Connections

A month or two ago, you were kind enough to help me out with questions concerning my recent acquisition, the Bondwell CP/M computer. I've now bought a printer and the problem is (you guessed it!) how do I connect the two together?

The printer is a Microline 83A wide carriage dot-matrix made by OKI Electronics of Japan. The model number is GE8223A. There is one socket at the rear which knowledgeable people look at and say 'Ah, a serial port...', by which I presume they mean RS232 or something. This could be nice as the Bondwell computer has a socket labelled RS232C, so it sounds as if they might be persuaded to talk to each other, but how exactly? The sockets are different sizes, with different numbers of pins (25 on the printer and 9 on the computer).

I have a soldering iron and could make up a cable if I knew the correct pin connections. Can you assist? Is the printer Epson-compatible?

K C Jones, Greasby, Wirral.

Simple! Here are the connections to make (assuming you've acquired 25-way and 9-way D connectors). Pin 2 to pin 3, pin 3 to pin 2 and pins 5 together.

Epson compatible indeed! What you have is some archaic old dot-matrix monster that you'll be lucky to get anything from and which will eat ribbons (assuming you can find them) and repair engineer's time like they're going out of fashion.

If you paid somewhat less than a couple of quid for it, fair enough, otherwise, I would ask you to think carefully before entertaining the idea of purchasing anything in a similar vein. You've bought an antique computer and an equally prehistoric printer to go with it, now give it a rest...

TIP Maplin mayhem

In Tech Tips (*Express* 71), I said that it was possible to purchase 256K DRAMs from Maplin Electronics for under £1. This should, of course, have read under £10 – somehow the zero got missed. The actual price of a 256K DRAM chip according to Maplin is £9.95. Contact everyone's favourite electronic mail-order supply company on 01-748 0926.

HELP! Drive dilemma

I have just purchased an Olivetti PC1 which is fitted with a single disk drive. I have been offered a 20Mb hard drive for the outrageous sum of a tenner!

The drive in question is a Xebec 4020 which appears to be the same size as a 5.25-inch floppy disk drive. It does not have a power supply with it. Can it be interfaced with the PC1?

Building power supplies is not a problem as long as I know what voltages/current ratings are required. Could this be a bargain or junk?

Rob Taylor, Braintree, Essex.

Both, as a matter of fact! As to which, the outcome depends very much upon you. A power supply is not needed as PC hard drives are intended to connect to the power supply driving the computer (they usually have a couple of extra feed lines with 4-way plastic plugs hanging free, for just such situations), but the PC1 is a strange beast and connecting this drive to it may overload the power supply.

The drive is meant to be housed within the PC to which it is being attached. This is obviously not possible with the PC1, so you'd need to have an ugly uncased drive floating around at the side of the machine, with the result that the drive will be exceptionally prone to knocks and could crash.

Finally, unless you're prepared to buy an expensive expansion box for the PC1, you can't connect the data channels of the drive to the computer. A tenner? There's more to it than that. My advice? Give it a miss...

• *The Olivetti PC1: a strange beast...*

HELP! Printer probs

Could you please help me with a problem I have getting my printer to print in colour? When I use the printer with *Neochrome* and I press Alt and Help to do a screen dump I get a printout of the screen but it's in monochrome.

My computer is an Atari 520STFM and my printer is a Star LC-10, colour. I am using a colour TV, is that the problem? Please help.

Robert Hudson, Pontefract, West Yorkshire.

The problem is that you need to have a printer driver that will send the correct 'colour' codes to the LC-10 to enable it to print in colour. The way you're using the machine at the moment, the printer is behaving as any ordinary monochrome-only printer.

Contact the dealer from whom you bought the LC-10 for a suitable printer driver, but be aware that many software packages simply won't support the

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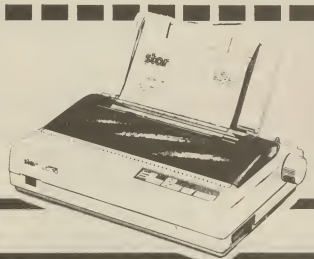

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colour abilities of the LC-10. If you can't get hold of a driver from your dealer, try contacting one of the many public domain libraries supporting the ST. Star's LC-10 is a very popular printer and there are a lot of drivers around especially for it.

HELP! Unreadable text

I find that my Atari 520STFM's 80-column text display is almost unreadable on my standard television. I'd like a colour monitor, but still wish to use it as a TV.

Are separate television tuners available which can drive a monitor? Failing that, what performance do the combined TV/monitors advertised in your magazine possess? Are all SCART TV sockets equal? I've heard some require 150-ohm in-line resistors to avoid colour saturation difficulties.

J. Robertson, Edinburgh, Scotland.

Television tuners are available usually priced between £50 and £60. The best source is Shopping Express. Of course you'll need to have the monitor to be driven, but in these days of cut-price dealer wars, locating a cheap monitor isn't a problem. Or how about buying a second-hand Amstrad CPC colour monitor and converting it for use with the Atari? This is a very simple modification which, when complete, will enable your ST to operate with the CPC monitor providing surprisingly good results.

Combined TV and monitors such as those made by Pye, Ferguson, Philips *et al*, are very good. For little more than the price of a quality dedicated monitor (around £300), you get a colour television too. For a demonstration, pop along to any branch of Dixons or Comet, or one of the many High Street television dealers.

Or to purchase directly, contact Evesham MIcros (0386 765500). The company is selling the Pye 15-inch combined TV and monitor for £249 complete with a lead to attach the display to your machine and the price includes VAT and delivery!

Any connector bearing the SCART name should have standard signal I/O. With display devices requiring resistors, the problem lies with the display electronics, not with the connector.

HELP! Which machine?

What I really need is a capable word processing system. The computer must run fast enough to be good enough for word processing use (eg, fast disk access for saving and loading documents, deleting, copying text and allowing instant key press response to screen) and, in particular, must be able to run the Borland *Sprint* word processor package (and do so with reasonable speed).

It must have a hard drive in its main chassis capable of containing the word processing program – thereby allowing immediate access to it, without loading in from disk, and also allowing documents to be saved to the main drive instead of a floppy disk. There must be sufficient memory so as to be uninhibited with the saving of large documents and processing power (though I am not ever considering using spreadsheets, databases, account packages or games on it – only the word processor).

In addition to the hard drive, there must be a floppy drive (preferably, again, built into the main chassis, rather than having leads trailing to a separate drive) so back-ups can be taken of documents and stored in a safe place, away from the work place.

The floppy drive must be a 3.5-inch type – I'm assuming Borland *Sprint* can be available on this format, because I hate 5.25-inch disks due to their lack of compactness and durability. Also the floppy drive should preferably be the 1.44Mb type rather than 720K and it must be double-sided.

The monitor must be clear enough – text must be seen clearly and not be too small – to prevent eye-strain. Preferably, the monitor should be anti-glare FST type, preferably able to highlight areas of text due to be printed in bold and need not be coloured. I prefer amber mono screens as long as they support Borland *Sprint*.

However, the monitor must be an 80-column type. I know I keep placing much emphasis on the Borland *Sprint* word processing package, but I firmly believe that it has everything that I shall need and at a reasonable price *(Ah, right. I though perhaps you were the programmer. – Uncle Techtip).*

The keyboard must be of the enhanced type and if possible, have a keyboard lock feature available – to prevent my colleagues ruining paragraphs as they lean over my desk – with microswitches under each key.

The printer must be relatively fast, be 80-column and be capable of clear printing (with underlining, and double strike modes). It must take sprocketed paper yet, preferably, also be able to take single sheets of A4 paper. It should be fairly quiet and must have a pound sign. I don't need colour printing *(I'm surprised – Unc).* Would the Star LC-10 mono suit?

I would prefer my word processing system to be desktop rather than upright or floor standing, but I'm not worried about expansion slots .

Lastly, the subject of money. I have a rough budget of only £1,200. The Borland Sprint software costs approximately £200. If the Star LC-10 printer would suit my needs, it too costs £200. That would leave £800 for the monitor, keyboard and rest of the system. If absolutely necessary, the budget can be extended by £300.

Paul Brohee, Richmond, North Yorkshire.

It's a tall order! You want – everything, but are willing to pay relatively nothing. Sure, £800 is a lot of money, but computer systems gobble up life savings and you wouldn't get much change from £800 after buying a games computer, monitor and hard drive let alone a 'business' machine.

Do you really need a 1.44Mb high density drive? And what's this nonsense about anti-glare, flatter, squarer, tube (as I assume FST means) monitors?

Yes, the Star LC-10 will fit your needs perfectly. It's a quality device that commands much respect in the industry. You seem to have set your mind firmly on Borland *Sprint*. Why, I cannot say, for there are many other word processors at least as good and cheaper. But there you are. The quirk of the modern shopper. There's obviously no point in my trying to dissuade you.

So, to the machine. £995 (you did say the budget could be increased by a further £300 if necessary) will buy you a 386 PC-compatible running at 16MHz with 1Mb of RAM on board – that's fast, large and powerful. An enhanced keyboard, 1.44Mb 3.5-inch drive (1.2Mb 5.25-inch drive whether you like it or not) and a 20Mb hard drive all built into the same case. Parallel ports for your printer and a super high-resolution VGA monitor are also included. The name of this wonder machine? The Dolan 386-SX. Call the company on 0267 234444.

So there you are. Almost the machine you wanted at a price which won't give your bank manager a coronary. I don't know how I do it, I really don't. I was just saying to Madge in the High Street the other day, "Madge," I said...

HELP Red, amber, green

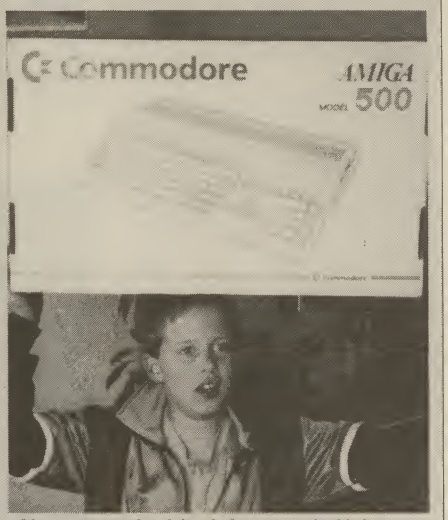
I recently purchased a Commodore Amiga 500 which at present is functioning OK. However, I have noticed a few differences between my machine and that of my neighbour's which he purchased at roughly the same time but from a different shop.

The differences are that the power on LED on his machine is red, but on my Amiga the power on light is green. With the disk active/running light, his machine shows a green LED and mine shows amber. This may not sound much but the two lights (amber and green) are so alike that it is easy to confuse the two *(except one is coloured amber and the other green – Unc).*

Finally, when backing up a disk with his version of Workbench, the sector copied is immediately verified whereas using mine, a number of sectors are copied at a time and then the program verifies.

Each difference on its own does not signify much, but with the three, I was wondering if I have purchased a new machine or a repaired computer, particularly as all other pictures I have seen of the Amiga have red and green running lights.

D Riley, Northwich, Cheshire.



• Distress not at the sight of what comes in this box

Gosh, you really have worked yourself into a tiswas over nothing, haven't you? Different coloured LEDs do not a second-hand machine make. The difference lies with Commodore itself. Haven't you ever read the phrase "...reserve the right to change specifications without notice at any time..."? You neighbour's computer is a slightly earlier Amiga, yours – a slightly updated version with a superior Workbench. Worry not. The machine is perfectly alright and will continue to provide sterling service for many years to come.

TIP Chip chat

I read with interest the reply you gave to A Rodenhurst (*Express* 67) about adding RAM chips to the new style Amiga 500 mother board. Actually, if you do put the chips in, it does give you more memory (the conversion is more involved than this, so if anybody wishes to know more they can write to me), but it does invalidate your warranty.

If anybody thinks it doesn't work, I have done it myself and it works perfectly and I still have space for extra expansion in the expansion socket.

S. Elliot, Leamington Spa, Warwickshire

This may work, but it isn't a good idea to invalidate your warranty and doesn't S Elliot's phrase "...conversion is more involved than this..." give you a little jolt of foreboding? Take my advice: Don't open your machine while it's under warranty. If you must, then take it to an authorised Commodore repair dealer.

EUROVISION SOFT C

This year's European Computer Trade Show, to be held at Islington's Business Design Centre from April 1-3, promises a great deal more than the opportunity for manufacturers and distributors to tie up deals.

Prominent among the proceeedings will be the awards for 26 different software and hardware categories put forward by leading European computer magazines. Not usually ones to blow our own trumpet, *Express* has been invited to put forward nominations along with other titles from the Future Publishing stable – *Amiga Format*, *ST Format*, *Amstrad Action* and *Your Sinclair* – to represent the British side of the matter.

Along with the Japanese and American magazines *Log-In* and *Compute!*, eleven other top Euro-mags have put forward their contributions. From France there's *TILT*, *PC Compatibles* and *Generation 4*; from Germany, *Computer Live* and *Power Play*; and from Italy, *Video Giochi*, *PC Software* and *BIT*. Spain's nominations are from *Micro Mania* and *Amstrad Professional* while *Dator Magazine* forms the Swedish contingent. Abba, Katie Boyle and Terry Wogan won't be anywhere in sight.

NOMINATIONS FOR LEISURE AWARDS

BEST ANIMATION

Ultra-fast cartoon action on the ST and Amiga in the form of *Space Ace* from Canadian coders ReadySoft ran away from the field with the nominations in this category.

Italy – *Space Ace*, Readysoft
France – *Indianapolis 500*, EA
Germany – No nomination
Spain – *Shadow of the Beast*, Psygnosis
UK – *Space Ace*, Ready Soft
Sweden – *Space Ace*, Ready Soft

BEST GRAPHICS

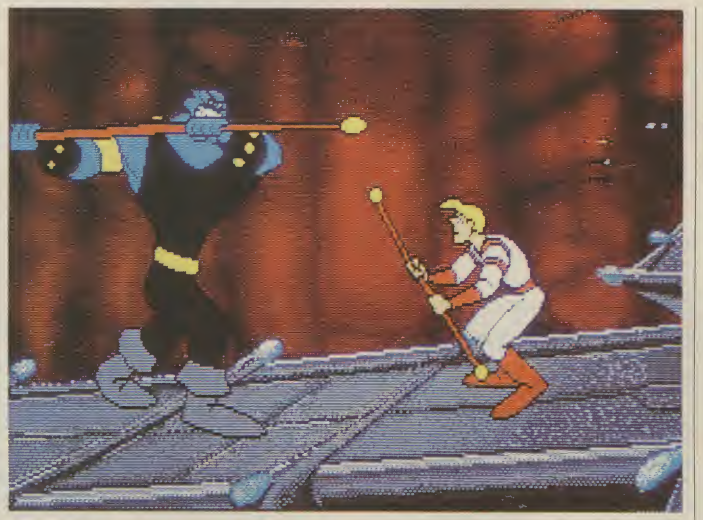
Psygnosis hardly needs any introduction as a purveyor of the perfect pixel since all its releases over the last couple of years have left the opposition standing. Most of Europe agrees.

Italy – *Shadow of the Beast*, Psygnosis
Germany – *Xenon II*, Imageworks/ Mirrorsoft
France – *Shadow of the Beast*, Psygnosis
Spain – *Batman*, Ocean
UK – *Shadow of the Beast*, Psygnosis
Sweden – *Shadow of the Beast*, Psygnosis

BEST SOUND AFFECTS

Future Wars has already picked up a few gongs for its sonic effects but *Rock 'n' Roll*, with its unambiguous title, could lend it credibility.

Italy – *Future Wars*, Delphine Palace
France – *Future Wars*, Delphine Palace
Germany – *Rock 'n' Roll*, Rainbow Arts
Spain – *Shadow of the Beast*, Psygnosis
UK – *Ghouls 'n' Ghosts*, US Gold
Sweden – *Shadow of the Beast*, Psygnosis



• *Walt Disney coming at you in the ultra-fast* Space Ace: will it waltz away with accolades in the category of Best Animation?

BEST ACTION GAME

The French have clearly been stunned by *Stunt Car Racer*, while the Swedes, as always, have opted in favour of praise for a curiosity.

Italy – *Dragon Ninja*, Ocean
Germany – *Xenon II*, Imageworks Mirrorsoft
France – *Stunt Car Racer*, Microprose
Spain – *Batman*, Ocean
UK – *Batman*, Ocean
Sweden – *Terry's Big Adventure*, Grandslam

BEST ARCADE CONVERSION

Another chance for US Gold and Ocean to slug it out. But there's also the intriguing differences to contemplate between the ultra-violence of *Operation Wolf* and the cutesy addictiveness of *Rainbow Islands* and *New Zealand Story*.

Italy – *Ghouls 'n' Ghosts*, US Gold
Germany – *New Zealand Story*, US Gold
France – *Rainbow Islands*, Ocean
Spain – *Strider/Chase HQ*, Ocean
UK – *Strider*, US Gold
Sweden – *Operation Wolf*, Ocean

BEST SHOOT-'EM-UP

Can the original efforts gun down the coin-op conversions? With *Xenon II* and *Blood Money* featured, there's no reason why not.

Italy – *Blood Money*, Psygnosis
Germany – *Rock'n Roll*, Rainbow Arts
France – *Silkworm Sales*, Curve/Virgin
Spain – *Blood Money*, Psygnosis/*Xenon II*, Imageworks/Mirrorsoft
UK – *Xenon II*, Imageworks/Mirrorsoft
Sweden – *Operation Wolf*, Ocean

BEST ADVENTURE GAME

No trolls and goblins here. The new generation of adventures have clearly made their mark both in Britain and on the mainland.

• Indiana Jones: *best adventure?*

Italy – *Indiana Jones and The Last Crusade*, US Gold
Germany – *Indiana Jones and The Last Crusade*, US Gold
France – *Future Wars*, Delphine Palace
Spain – *Indiana Jones and The Last Crusade*, US Gold
UK – *Future Wars*, Delphine Palace
Sweden – *Arthur* (PC), Infocom (Activision)

BEST ROLE PLAYING GAME

Italy – *Hillstar*, US Gold
Germany – *Curse of the Azure Bonds*, SSI
France – *Chaos Strikes Back*, FTL/Mirrorsoft
Spain – *Bloodwych*, Mirrorsoft
UK – *Dragon's Breath*, Palace
Sweden – *Dungeon Master*, FTL/Mirrorsoft

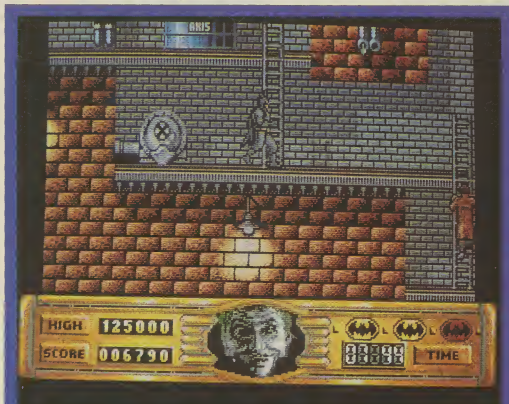
BEST STRATEGY

Pretty much a clean sweep here for all 1,000 worlds of the classic *Populous*. Now reinforced by a Data Disk and providing new types of lands, the ultimate strategy game could still be making an appearance next year.

Italy – *Populous*, EA
Germany – *Populous*, EA
France – *Populous*, EA
Spain – *Populous*, EA
UK – *Austerlitz*, Mirrorsoft
Sweden – *Fire Brigade*, Panther Games

MOST ORIGINAL GAME

In a year which saw *Populous*, *Sim City* and *Archipelagos* all released to ecstatic



• *The caped crusader's capers make the cut:* Batman *nominated for best action game.*

• F-16 Combat Pilot: *clearing the skies of competition when it comes time to decide on the best flight simulator?*

CONTEST

Ever wondered what's Top of the Softs across the Channel? To coincide with the forthcoming European Computer Leisure Awards, Express surveys the continental critics' faves...

reviews, this award will take some deciding. Despite Future as a whole going for *Stunt Car Racer*, *Express* is putting it's money on *Populous* – with the exception of our Production Editor, who is quite happily putting all his wages on *Sim City*.

Italy – *Tetris*, Mirrorsoft
Germany – *Populous*, EA
France – *Sim City*, Maxis Infograme
Spain – *Archipelagos*, Logotron
UK – *Stunt Car Racer*, Microprose
Sweden – *Populous*, EA

BEST FLIGHT SIMULATOR

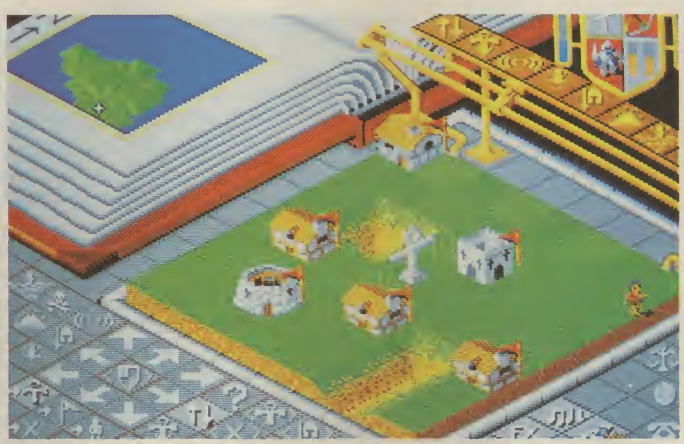
While Germany's choice does seem quite perplexing for other than technical reasons, here it's a single sim that clears the skies of competition.

Italy – *F16 Falcon*, Mirrorsoft
Germany – *Their Finest Hour*, Battle of Britain, US Gold
France – *F29*, US Gold
Spain – *F16 Combat Pilot*, Digital Intergration
UK – *F16 Combat Pilot*, Digital Intergration
Sweden – *F16 Combat Pilot*, Digital Intergration

BEST SPORTS SIMULATION

Don't be enormously surprised if *Kick Off* scores on this one.

Italy – *Kick Off*, Anco



• Already touted as the favourite in the Best Strategy category, is it possible the the perplexing Populous will be Best Game, too?

France – *Great Courts*, Anco
Germany – *TV Sports Football*, Cinemaware
Spain – *Kick Off*, Anco
UK – *Kick Off*, Anco
Sweden – *Kick Off*, Anco

BEST EDUCATIONAL PROGRAM

Italy – *HTX* (Amiga), Cloanto Italia
France – *Les1001 Voyages* (ST), Infogrames
Germany – *Sim City*, Infogrames
UK – *The Euro Series* (PC), Topware

NEW TITLE WITH THE GREATEST CHART POTENTIAL

Given the chart presence of *Rainbow Islands* – gained since the nominations were cast – it shouldn't be too difficult picking a winner here.

Italy – *Dragons Breath*, Palace
France – *Indianapolis 500*, EA
Germany – *Dungeon Master II*, FTL/Mirrorsoft
Spain – *Rik Dangerous*, Microprose
UK – *Rainbow Islands*, Ocean
Sweden – *Rainbow Islands*, Ocean

TOMORROW THE REST OF THE WORLD?

For some time now, *Express* has been intending to either conduct a survey or run a regular listing of the most popular computers and software around the world. From Alaska to Zimbawe, New Guinea to Peru, we've wanted to find out the hot sellers in the world's remotest software shops.

But we're stumped. Honestly. How do you go about finding the telephone number of a shop in Greece, let alone Thailand? Anyone out there know any? We'll send you the game of your choice if you can help us.

SOFTWARE PUBLISHER OF THE YEAR

Three Brits and three from the US. But no software publisher appears to have wowed the whole continent.

Italy – Psygnosis
France – Electronic Arts
Germany – Lucasfilm
Spain – Ocean
UK – Microprose
Sweden – US Gold

GAME OF THE YEAR

The Germans and the Swedes have opted for the brain-crunching *Populous* – while Spain, France and Britain go for the speed.

Italy – *Shadow of the Beast*, Psygnosis
Germany – *Populous*, EA
France – *Indianapolis 500*, EA
Spain – *Batman*, Ocean
UK – *Kick Off*, Anco
Sweden – *Populous*, EA

NOMINATIONS FOR HOME PRODUCTIVITY AWARDS

Across a continent where the PC dominates sales of machines for serious home use, it's surprising that the nominations for business applications show no less diversity than those for leisure.

As far as the nationality of the producers of the most popular serious software is concerned, there's no competition. The Americans clearly ship more useful software than any other country in the world. The Ashton Tates, Borlands, WordPerfects, and Electronic Arts of the US team feature heavily.

The Amiga's graphics power in the 16-bit stakes looks like ensuring it the number one position in the award charts, while its steadily increasing amount of quality serious software is pitching it firmly into PC territory.

COMPUTER OF THE YEAR

Italy – Olivetti PCS 286
Sweden – Commodore Amiga
Spain – Atari Portfolio
Germany – Psion MC4000
UK – Commodore Amiga
France – Amstrad PC 2086

PRINTER OF THE YEAR

Italy – Citizen Swift 24
Sweden – No Candidate
Spain – Star LC10 9-Pin Colour
Germany – C Itoh 610
UK – Star LC10 24-Pin Colour
France – Citizen Swift 24

UTILITY OF THE YEAR

Italy – *PC Tools* 5.0, Central Point
Sweden – *ARexx*, Williams S Hawes, Amiga
Spain – *Norton Utilities* 4.5, Peter Norton Computing
Germany – *Norton Utilities* 4.5, Peter Norton Computing
UK – *Deluxe Paint III*, EA
France – *Norton Utilities* 4.5 Peter Norton Computing

BEST PRODUCTS FOR THE PC

Italy – *Lotus123* (release 3), Lotus
Spain – *Microfax* (or *Datacopy*)
Sweden – *Microsoft Works*, Microsoft
Germany – *Animator*, Autodesk
UK – *Secretary Bird*, Mindscape
France – *Norton Commander* 3.0, Peter Norton Computing

BEST PRODUCT FOR AMIGA

Italy – *Deluxe Paint III*, EA
Spain – *Kind Words* 2.0, Disc Company
Sweden – *Deluxe Paint III*, EA
Germany – *Professional Page* 1.3, Golddisk
UK – *Deluxe Paint III*, EA
France – *ARexx*, William S Hawes

BEST DATABASE

Italy – *dBase III Plus*, Ashton Tate
Sweden – *Superbase Professional*, Precision Software
Spain – *dBase IV*, Ashton Tate
Germany – *Paradox* 3.0, Borland
UK – *PCFile Plus*, Shareware Marketing
France – *dBase IV*, Ashton Tate

BEST GRAPHICS

Italy – *Deluxe Paint III*, EA
Sweden – *Deluxe Paint III*, EA
Spain – *Deluxe Paint III*, EA
Germany – *Deluxe Paint III*, EA
UK – *Deluxe Paint III*, EA
France – *Harvard Graphics*, Software Publishing Corporation

BEST PRODUCT FOR ST

Italy – *GFA Basic* 3.0, GFA
Spain – *PC Speed*, Gesteiner
Sweden – *Calamus*, Signa
Germany – *Adimens ST Plus*, ADI
UK – *Spectra GCR*, HiSoft
France – *Spectra GCR*, HiSoft

BEST WORD PROCESSOR

Italy – *Word* 5, Microsoft
Sweden – *ProWrite* 2.5 (Amiga) New Horizon Software
Spain – *Wordperfect* 4.0
Germany – *Ami-Professional*, Samna
UK – *Script* (ST), Signa
France – *Wordperfect* 5

BEST DTP PROGRAM

Italy – *Pagemaker*3.5 (Mac), Aldus
Sweden – *Professional Page*, v1.3, (Amiga), Goldisk
Spain – *Xerox Ventura Publisher* 2.0 (PC/Mac), Rank Xerox
Germany – *Xerox Ventura Publisher* 2.0 (PC/Mac), Rank Xerox
UK – *Calamus* (ST), Signa

THE END OF PROGRAMMING AS WE KNOW IT

CRL's Developer's Universal Non-Programming Environment is all set to transform the way software is written. In fact it removes the need for any coding at all. Andy Storer takes a stroll over DUNE and looks forward to writing his first best-selling game.

How many thousands of you out there have a great idea for a game, know a good artist you could work with, but know next to nothing about binary, hex and parsers? Always wanted to have a go? Well, step up CRL and DUNE – a system designed to allow the non-technical to combine digitised images, text, paint package screens, animation and sound samples to produce anything from games to educational training applications. But how does it work?

Computer games have, in the past, been produced by designers and graphic artists working together with machine code programmers to implement various component features. So, design and look of software has required a thorough understanding of the means by which the storyline and graphics are translated into raw code or assembler. Indeed, to date this specialism has prevented many traditional writers and artists from becoming involved in the games industry.

MAKING IT SIMPLE

DUNE draws on the thinking at the heart of hypermedia applications like Apple's HyperCard. Here a user never gets to see the code underpinning what he's programming – all operations are handled by active icon 'buttons' linking various media like text, pics and animation. You just hit a button and the corresponding material is loaded to screen – the actual mechanics relying on you previously assigning an action and a 'pathway' for the operation to find the particular file it is meant to deal with.

A 'button' could be contained in an area of a picture so that clicking on that portion calls up another picture file containing a close-up of that localised subject. In the same way, individual words in text documents can be made active, such that clicking on them calls up more information on their meaning or relates them to associated subjects. Indeed, 'associative' is the key word here, for when using DUNE you merely create 'buttons' that are associated with various materials stored as files on disk or in RAM.

Of course, there's some pretty advanced code lying beneath the surface of DUNE. In fact, CRL commissioned 18-year old John Chasey to write the code in C so it could easily be ported to other machines. Indeed, the 'button' concept has been renamed as 'shots' and they are designated to be in any shape or size, from a single pixel to a whole screen.

A user simply utilizes the mouse to rubber-band a box in an area of screen, which, once defined, can be made invisible or remain a titled button. Each shot can then be linked to six others by file access pathways called 'routes' where the user simply types in the drive and file name to be called.

DIY DESIGN

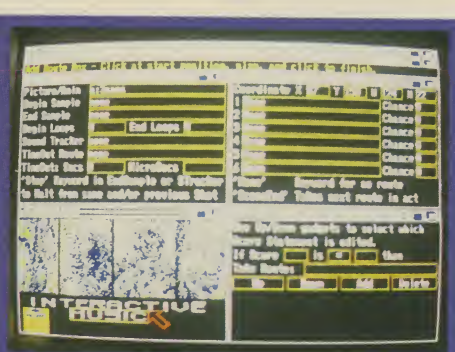
DUNE is Amiga-based at present although CRL expects PC and Archimedes versions to be available within the next month or two. The routes available allow you to call up *Deluxe Paint III* screens, *Photon Cel* animations and ASCII text files and to combine them with *FutureSound* samples and/or a selection of *SoundTracker* sequences.

Sound and music can be given start and end times, duration and looping information to coincide with particular seqeunces of visuals. It's also possible to introduce a random element into proceedings so that chance factors affecting routes taken and sound/graphics durations can be brought to bear in a design.

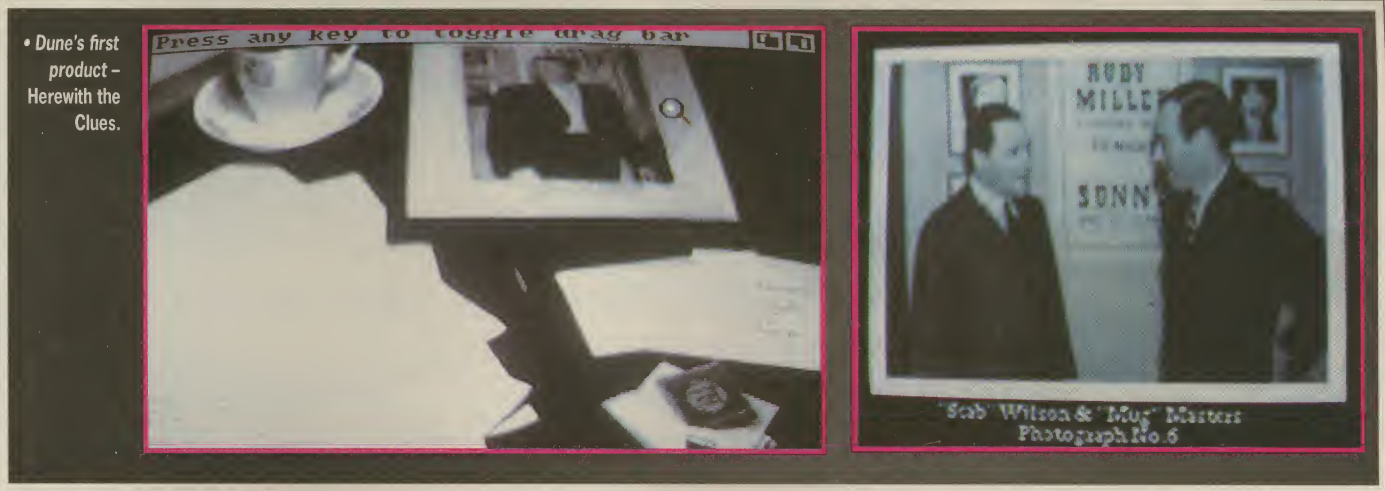
For gaming applications in particular, up to 10 different scoring parameters can be designed. It's not too difficult to see how these could correlate to the kind of attributes appearing in role-playing games.

Alternatively, different scores running simultaneously could be used in training applications to monitor

• DUNE allows you to combine digitised images and assign each one to an associated file that may contain graphic, text, animation or sound sample data.



• The underlying 'coding' area – not a single line of assembler or binary in sight. The bottom left area shows you the screen the shots and routes are referring to.



• *Dune's first product – Herewith the Clues.*

performance across a range of areas. Flexibility has been built into DUNE from the outset.

ENABLING DESIGN

DUNE has been configured to allow non-programmers to quickly produce two-disk games for the Amiga. Screen handling covers ranges from 8-colour quarter screens right up to 32-colour full screens.

It's also easy to overlay text imported in to *DPaint III* complete with font information onto graphics screens. Similarly, digitsied photos can be employed – the current version of DUNE is capable of addressing hi-res HAM graphics for added realism. As such, the system opens up wide opportunities in areas other than games – perhaps interactive encyclopedias, product guides, information manuals and advertising storyboards could be authored using the system.

CRL is thus hoping to license what it calls 'these tools for creation' to other software houses and educational developers for which it will receive a royalty 'like Dolby or Technicolour does in music and film'. Indeed, the company is expecting the system to open up the way for musicians and film writers and designers to step into a games industry which is, arguably, getting a little thin on original ideas. The saving grace here might be the emergence of the CD-ROM format enabling access of up to 600Mb of diverse data. With that amount of storage, compact code is a thing of the past. In fact, the space would be there to take all the time and energy in the world to introduce fresh elements into gameplay.

EASY 3D

DUNE can convert 2D images into 3D views. A user merely designs the 'primitives' of the scene in *Dpaint III* – say the trees, hill profiles and buildings in a landscape – and DUNE transforms them into 3D screens with the user able to define the viewpoint to be adopted. Once the desired view is chosen, it can be saved to disk and recalled later.

Thus, it is relatively simple to design all the different holes on a golf course as a 2D plan and command DUNE to call up the 3D views associated with the position of the ball during subsequent gameplay.

SERIOUS SIMPLICITY?

CRL stresses, however, that DUNE is ideally suited to build any application – whether it be for leisure or business. Indeed, Desk Top Presentation would seem to be an ideal implementation – DUNE could be used quickly to generate reports combining text and graphs. On the Amiga then, the resulting full-colour screens could be output to overhead projectors or large monitors to produce effective management presentations for training and sales sessions.

DUNE SOON?

Unfortunately you can't just go out and buy DUNE. CRL regards it as a serious development tool for software authoring and the company has no plans to make DUNE available to the general public. Instead CRL has approached all the major software houses to license the product from them – the response is said to be incredibly favourable.

The reluctance to release it for mass production is because DUNE is continually being upgraded and would require a great deal of customer support were it to arrive on the open market.

Instead, CRL is inviting would-be developers to get in touch if they have any serious product developments in mind. Then they can expect, subject to negotiation, to get their hands on it for free.

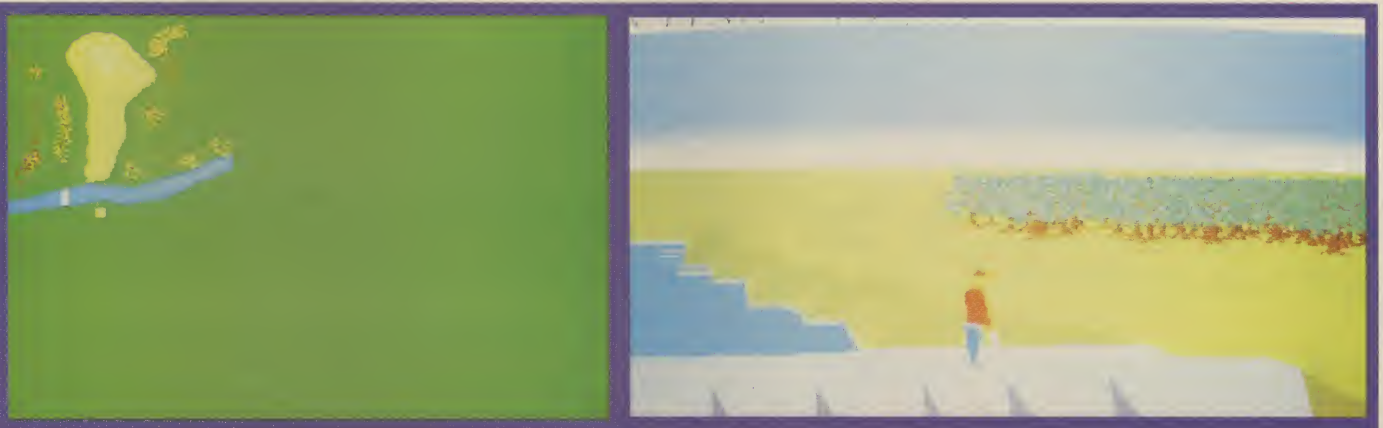
PC and Archimedes versions will be available shortly. An ST version may depend on Atari's plans for CD, so see *Express* news and watch this space. Meanwhile, CRL is on 01-533 2918.■

PIPELINE PRODUCTS

There's already one DUNE authored game on the market – *Herewith the Clues* – an adaptation of a Dennis Wheatley project. Originally released as a minor multimedia event in itself – as a folder full of documents, photos, press cuttings and exhibits – *Herewith the Clues* pitted the reader as a Metropolitan Police investigator tracking down a bunch of terrorists in pre-war London.

The project was sufficiently innovative to lend itself perfectly to the DUNE system – invloving digitised photographic material along with text reports. All in all the DUNE version contains 11 photos, 16 exhibits, 25 'pages' of character information and 50 'pages' of background material. Pages are composed of 'shots' with various routes activated along the way. Your aim is to locate a murderer through the evidence before you.

Next up from the DUNE stable will be *Psycho-Killer*, a colour digitised Hitchcock-style thriller, *Cult of the Severed Head*, a new-wave horror from the film special effects people who worked on *Hellraiser* and *Nightbreed*, and two other unnamed projects – one of which is purported to be a surrealist adventure – the other a cowboy shoot-'em-up.



• *DUNE features a faciltiy to quickly convert 2D plans into 3D viewpoints*

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THE CROWN JEWEL?

Writers are by nature a fussy lot. You will find them all swearing blind that their method and machine is by far the greatest.

There remains the old school who sniff loftily at the mere mention of a word processor, preferring the comforting clickety-clack of a trusty old typewriter. And for every owner of an Olympia PK3000 there is also an ever-so-smart Apple adherent who has spent £1,000 just for the dubious privilege of using *MacWrite*.

Somewhere in the middle is the real word processing generation. Let's admit it – we are a nation of PCW owners.

However if, like most PCW owners, you are looking for a simple machine with which to bang out some letters and maybe fiddle around with the home accounts, there is an alternative – an obscure MS-DOS option called the Sanyo MBC-500.

Crown is selling the Sanyo MBC-550 at a lip-smacking £225. Is this computing's best bargain? Colin Campbell takes a look...

Warrington-based Crown Computer Products has recently bought some 5,000 of these machines for a kind of end-of-the-line clearance sale.

For £225 you get a twin 5.25-inch disk machine complete with mono monitor, dot-matrix printer, and two software packages – *WordStar* and *CalcStar*. This is one cheap computer. But what exactly are you getting for your money?

One myth that has pervaded the past half a decade is that the PCW is cheap. It isn't. Even the single-drive machine with just *LocoScript* costs £400. A double-drive version (which many people are talked into) costs a staggering £500. You can get an Amiga for that.

Despite the protestations of the mad mullahs of the PCW population, it has to be said that the vast majority never do anything more than process words, play a couple of facile games and maybe muck around with some figures.

In this, the Sanyo and PCW are very similar. Both can be set up by a child, neither have any frills, and both are pitched as cheap options – it's just that one is half the price of the other.

TECH NO NOTICE

Techno snobs will have a field day here. The MBC is, well, hardly state of the art. The main unit and keyboard are both a light silvery colour, reminiscent of desktop stereo units of the early 1980s.

It runs at 3.6MHz, which is hardly blistering. The disk drives are a tad noisy – this is a good job because otherwise you can't tell if they are working or not. The drive lights don't flicker when there is disk activity – they just stay on obstinately.

But technophobes will love the normally imposing back panel. Just a printer port, a video port, and that's about your lot. No serial port, so forget your subscription to Micronet. And, oh joy, there are great big words and arrows telling you exactly where every lead goes.

The drives are pretty slow on the uptake but not frustratingly so. Surprisingly, once started it can run at a bearable pace. The BASIC graphics demo was fast(ish) and *WordStar*, while being its usual cantankerous self, skipped along without any problems. But so many people are used to the program's idiosyncrasies that it's hardly worth putting up any resistance anymore. If you haven't used the program before, stick your nose in the manual for five minutes and then spend a few months extracting its best features.

The monitor is amber which some people will hate. I find it a lot less tiresome than a green monitor and less boisterous than white on blue. Not a patch on more expensive options such as paper white, amber is clean and crisp and won't give you a headache.

The printer was to be a low-end Olivetti, but stocks ran out and the DM100S was drafted in (ho ho). It can produce 200 characters per second in super draft mode and 100 CPS in ordinary draft. It has touch pad controls and a sheet feeder.

SOFTLY SOFTLY

Software options are extremely limited. The Sanyo runs Sanyo BASIC and MS-DOS 2.1, but it only has 128K of memory, which means that much of the PC software out there is closed off. Sharon Jamieson of Crown explains: "We realise that the software packages with the machine are limited. But we're finding a lot of people for whom this is their first machine. The manuals are very good and people can find their way around them easily."

There are some additional packages produced via an agreement between Sanyo and WordStar. They include *SpellStar, MailMerge* and *InfoStar*. Thankfully there is also a user group which has managed to stalk out just about everything which can run on the machine. Buyers are advised to call the Sanyo User Club on 01-942 9009. "Software wise, there are some odds and ends around," says Jamieson.

AND FINALLY

In the manual's introduction we are promised that the MBC can "satisfy the demanding requirements of today's post-industrial society". This is language from the time from which the machine hails (1984). Jamieson is more pragmatic: "We think it's good for people who want to get to grips with computing and for those who need a back-up. If something goes wrong with people's £5,000 PC they have something on which to bang out letters." In effect it's computing's black and white TV – good for those who can't afford a color TV, and a great addition to the spare room. For £225 it's a snip.■

MS-DOS BUT NOT PC

The Sanyo machine uses MS-DOS 2.1, so all the commands beloved of PC owners will work – COPY, DIR, FORMAT and the rest.

However the hardware of the Sanyo is anything but PC compatible. It shares the PC's 8088 processor, which allows MS-DOS to run, but beyond that the hardware is utterly different.

It has 128K of memory which can be expanded to 265K, and a serial port can be added as an extra. There is also a maths co-processor option which allows spreadsheets to run a little faster.

But the lack of any compatible expansion slots and the small memory capacity means that the majority of PC software simply will not work.

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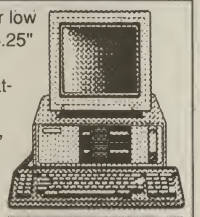

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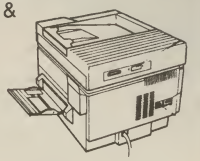

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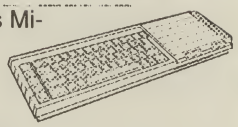

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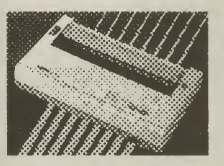

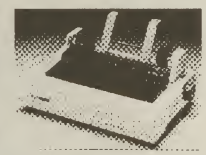

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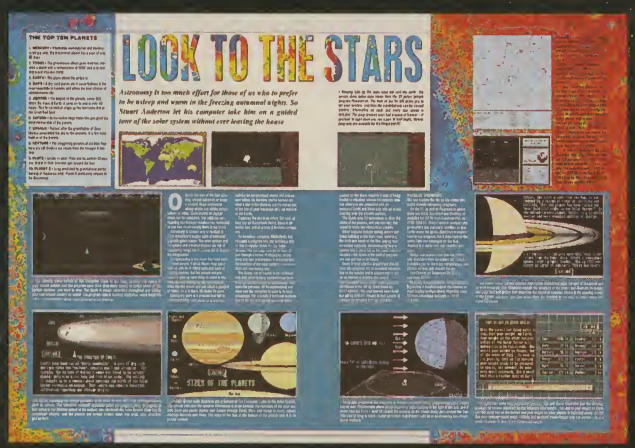
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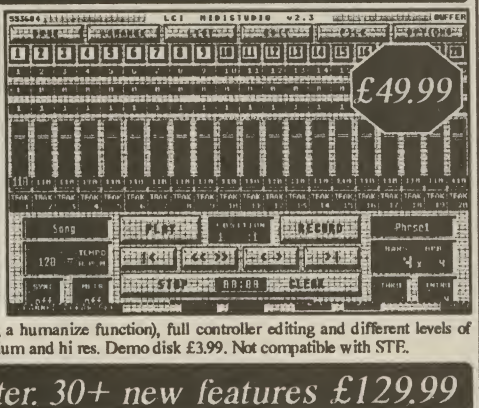

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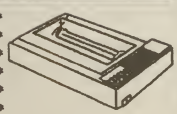

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STE Prices While Stocks Last

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This week's replies written by Ben Feinbaum.

Here comes the Sun

Mr A Non's letter set me thinking about the Shopping Express free ads section of yours and I have a few questions which I need answering on this and other topics.

1. What precisely is a Lamer, why is the L always capital, and is it absolutely necessary to own an Amiga to be one?

2. Why are some sections put in alphabetical order and some not?

3. What is Klaver Music Notation and Agtomation and Are The Capitals Really Necessary?

4. Why do the Amiga 'contacts' outnumber those for the ST by 3-1? Come to think of it, that isn't much of a mystery judging by what I saw going on in the computer lab at school.

5. Why is it that your Amiga columnist can't help mentioning the ST? This week half a column was dedicated to it.

6. There is no number 6.

7. You wouldn't happen to know the address of Elvira's fan club would you?

8. Just how do you pronounce "Yngwie J Malmsteen"?

9. You must have a *Sun* reader on your staff, judging by the headline in *Express* 69: "Games in bed for bored patients". Who is the culprit?

PS With the NeXT, if you operate one of the controls that are labelled in black on a black background, does a little black light light up black?

May your floppies revolve freely for many years to come.
Andy Royd, Rhyl, Clwyd

I am sorry but there are too many questions here to answer in full. So, I'll start at the top of the list and see how far I get before lunch.

I am told by our resident fifth former that 'Lamer' is a word no-longer in the heights of fashion, and as such, he wasn't quite sure what it meant. However, it used to mean someone who could not tie his shoes and chew gum at the same time – like ex-president Gerald Ford, who, incidentally, replaced Richard Nixon after Nixon resigned (he wasn't a crook) but who also had the dubious claim to fame of being absolutely annhilated by a peanut farmer in free election. Mr Ford didn't capitalise on his situation as replacement for an incumbent president, and I doubt very much if he would have capitalised the word 'lamer,' either.

Low notes

The idea propounded in your comment column that early buyers of the Atari STE acquired the machine cheaply in return for troubleshooting, is, perhaps, not as fanciful as you may think. Is this not the way that the home computer industry has treated potential customers since the early days of the ZX81? (Although, taking into consideration the amount of software now to be bundled with the new machines, the early option may, in the end, prove to be more expensive.)

If Atari wants to be taken more seriously in the market by business users, as it apparently does, then it will have to listen more carefully to what people have been saying for years – throwing in extra bits of software is not enough.

Clive Sinclair (God bless him) did, at least, have the savvy to realise that, however good or bad a machine might be, it's pretty useless without a decent manual. Have you seen what Atari provides with the STE? Yes, the same old pathetic tome but with the addition of an STE update printed on a tatty piece of paper which is not even the same size as the manual!

I have complained to Atari UK but, as yet, have not received the courtesy of a reply. Please don't let me put off anyone intending to buy the new computer – despite the bad press it's received it really is a cracking machine and I'm sure that it will sell well, despite Atari's indifferent approach to its customers.
Glyn Hale, Chalford Hill, Stroud, Gloucestershire

The STE situation is not a new one. For it is one thing to receive nothing for your money, and quite another to receive a computer that is good as a concept and good in specification, but which is perhaps a little behind in the support that is necessary to reach its potential.

Given time the market is likely to respond to the STE, as it is a fine machine. If you watch the developments as they occur, the future – I am convinced – will see the story unfolding favorably for the STE.

Rich uncle

I note your surprise that no 'rabid Tories' bothered to write to contradict your statement on South Africa. I can explain why. We Tories have long understood that socialism causes irreversible organic damage to the brain in those that suffer from it, rendering them subject to delusions and hallucinations that no subsequent exposure to reality can displace. Explaining their errors only causes them to thrash and froth, so we leave them alone to enjoy their dreams as best they can. After all, they are harming no-one but themselves.

A very similar phenomenon affects those unfortunates whose first exposure to computing comes via the Apple Macintosh. They are rendered forever incapable of understanding a real computer like the IBM PC.

Please tell Uncle Tech-Tip that his advice to Daren Wheeler is incorrect. The Hercules display card uses a different scan frequency than that of the CGA display (among other things); the connectors look the same, but have different signals on different pins, so the same monitor can't be used on both. Some CGAs have a composite video output for a monochrome grey-level monitor (just to confuse things); this is also NOT compatible with a Hercules-type monitor.

It is possible to use both display cards in the same machine but the Hercules must always be configured in 'half' mode to avoid memory conflicts, and they need different monitors.
Iolo Davidson, Tetbury, Gloucestershire

I tried to find Uncle Tech Tip to tell him about the errors he made – thank you very much for pointing out what he should have said.

There was a sign on his desk that told me why he was not in: gone West to find gold – I need some to pay my poll tax.

In Search of MSX

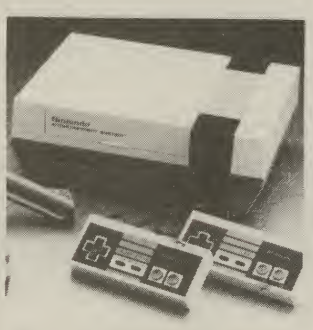
I am currently thinking of purchasing either an MSX (64K preferably) or a Nintendo – possibly both if I must – and I wonder if you could be good enouth to help me with my decision?

I am a *Nemesis*, *Salamander*, *Vulcan Venture* and *Trojan* freak in the arcades, so, when I heard all four were out on the Nintendo, I decided to go ahead and get one.

But the *Nemesis* trio is also out on the MSX (isn't it?) and I know that *Nemesis* was a near-perfect conversion. However, I can't seem to buy a new MSX anywhere (Perhaps you could print my name and address in case anyone out there wants to sell a computer or some software?) and only your mag seems to cover them.

Anyway, which machine would you advise me to buy? Do you know of any mail order places I can buy software for the MSX from? Which of the machines has the nearest and best conversions of the above games; and did *Express* ever review any of them – if so, which issues? How much should I be able to pick up an MSX for and would a 48K run all the games or would a 64K be better?

Thank you very much.
Vincent Viby, Morecambe, Lancs



• *Nintendo: a good option.*

As far as we know all those games are available on the MSX. Unfortunately, software for the MSX isn't so simple to come by as mainstream micros and you would be well advised to look elsewhere. Nintendo is a good option. Try UK distributor Serif on 0473 225941.

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A TOS-up

I am one of the thousands thinking of upgrading to an STE from an ST but I am worried about incompatibility problems.

I've heard rumours that a lot of games etc will run on an STE if an earlier version of TOS is installed in it. Is this possible? Does it work? If it does, wouldn't it be nice if *ST Format* magazine could include a version of TOS on its cover disk. We can but hope.

D Pestano, Upper Norwood, London

Atari did have a problem with a version of TOS, but that effected a very small percentage of people. The difficulty with the STE is that it has an internal specification that follows on exactly as an upgrade to the ST but that certain would-be software developers did not heed the machine's specifications closely enough. But see the answer to Glyn Hale's letter.

As for putting a copy of TOS on the cover disk of *ST Format* – *ST Format* is only allowed to reproduce packages to which it secures the rights before publication. Atari is unlikely to sell TOS to *ST Format* to give away.

Mine does

I am a bewildered STE user. No, I'm not going to moan about what doesn't work, so bear with me. What's really getting at my STE is this: several STE users, through your Tech Tips (which aren't really technical most times) and Express Mail columns, have found problems with software.

The first problem was aired a couple of weeks ago by some gent who discovered that *Ranarama* didn't work. It did on mine. Then I was shocked to hear that the excellent *Kick Off* didn't work. How did I know that it was excellent? Well, apart from yourselves, and the world, it worked on mine. Ah, yes. You did say that Anco had changed the program to suit the STE within 10 days. Fine. So I bought it and *Extra Time*. Both worked without any glitches.

So why does Uncle Tech Tip still say: "... as you look on with envy as STFM owners run *Populous*, *Kick Off*..." It works; if in doubt buy from WH Smith, if you can. By the way, if there's any STE owners in Reading who wish to communicate with me (preferably *Kick Off* owners) the address is below. Thanks *Express*.

Also, your sister magazine *St Format* had a cover disk which Mark Foster found didn't work on his STE; once again, it did on mine. So it looks as if I have the perfect STE.

One final note: will you end the futile debate of the ST versus the Amiga by not printing the letters? It proves nothing, does nothing and causes nothing. I own an STE, you own an Amiga, fine!

Neill Hodgkinson, 16 Dark Lane, Tilehurst, Reading RG3 6RA

How right you are. The my machine-is-better-than-yours debate may well keep us occupied, but does it enlighten, or inform, or, for that matter, entertain?

Indeed a few weeks back you may have noticed in this section a letter with the heading Raspberry Round-up. That, in fact, was meant to be a selection of letters representing every conceivable angle of the great machine debate, but it was somewhat ruthlessly cut to length by our well-meaning Deputy Production Editor.

Now, as to your letter...

A little history

Is it possible to get back copies of Issue 0; the preview one that was given away with magazines such as *ACE* and *PC Plus*? If so, will you please say how much they are and where I can get one from?

Mark T Baxter, Marple, Stockport

Back issues for many recent issues of *Express* are available for 85 pence. Write to *New Computer Express* Back Issues, The Old Barn, Somerton, Somerset. Phone 0458 74011.

Defying poetry

Flippancy has lately been affecting the measures served in your columns. I had hoped to lead the way back to the more serious, with some opening shots on tomorrow's challenge: "Does Dolan spike the Spectrum?"

Taken by value set in *Express* reviews on Dolan products, I had decided they were for me. However, like the great correspondent Head, I too have suffered disappointments in my time. Enough to confirm for me the belief that before you book a banquet for a hundred, nip in to the caterers and try a sandwich.

I winged a letter to the crags of Carmarthen (1st class, too) with gentle queries natural to a prospective, if timorous, buyer. Answer came there none.

There is a problem. If an inquiry into a sale leads to nothing, where will a gripe after sale get you? How can you gripe about a sale that is never going to be? Where has the problem got to now? Why are you buying all those stamps?

But that way madness lies – to speculation on anti-matter and Black Holes. And Carmarthen, God spare us, lies hard by the Black mountains.

What does Dolan do with correspondence. Obviously not read it. Perhaps the people there have only Write facilities. They write well enough in their advertising, chiding the Taiwanese for their 'tardy boxes' and declaring their own products to be 'unbeatable on spec and price'.

Maybe therein lies the answer. There is no word of availability. They didn't have a computer to hand. Hoisted on their own petard. But they also choose to remain silent. The valleys have closed in on them and the computer I never bought

To head off sympathisers offering laptop NCubes, I should add that another supplier by name Commodore was right untardy in assisting me with my enquiries and supplying a reputable and prompt PC.

It occurs to me that Dolan might consider a defence of 'what letter?" But blaming the messenger is distasteful. Telling him he never saw either Aix or Ghent defies all poetry.

GC Watson, Croydon, Surrey

Let me guess: you're a bit unhappy...

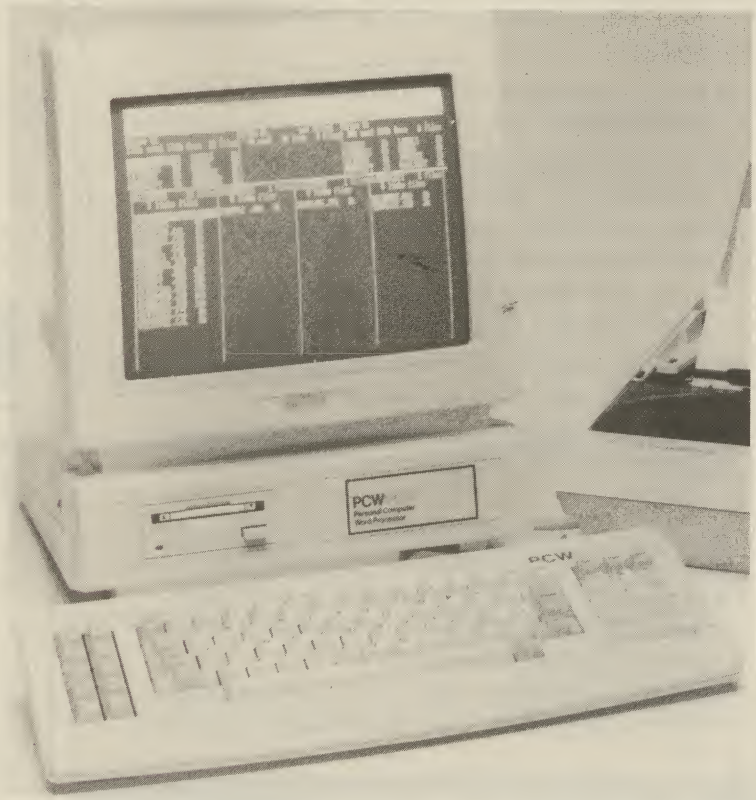
A juicy tale; or, a tale of the juice

What is the greatest number of times a PCW 9512 has been powered down, and back up, with a disk still in the drive, without harming the computer or corrupting the disk?

During a thunderstorm my wife, a newcomer to computers, was having problems. The machine kept blanking out, then going through the *LocoScript 2* loading routine having lost her (very urgent) work during the split-second power cuts that plagued us that night.

The choices seem clear, she could: forget the work (inadvisable); stay up late hoping the storm would play itself out (unlikely); or take a risk.

I spent a fraught hour at the keyboard, typing as fast as I knew how and saving to disk every few words – I tried every few lines and suffered a power cut just as I was due to save. I didn't keep count, but I reckon the machine had a total of between 15 and 20 power cuts with who-knows-what surges through its circuitry as the mains current was interrupted and restored. Inevitably, the disk was in the drive every time. Murphy's Law dictated that as soon as I had finished the document, the gaps between power cuts widened and we were able to print OK.



• The Amstrad PCW: it performs in storms beyond all expectation!

The PCW has given no trouble since (touch wood) and a patient test of all the documents stored on the disk indicates no corruption of data.

To think I once panicked because I made the elementary mistake of switching off with a disk in the drive.

PS: Please feel free to send the YTS trainee along the corridor to *8000 Plus* with a copy of this letter.

DEM Price, Astwood Bank, Redditch, Worcs.

The last thing you want to do in the middle of a surly storm is cuddle up to as piece of electronic equipment – especially a PCW. That notwithstanding, you shouldn't be booting up your computer with the disk inside. Wait until the machine is on and then load-up.

Failure to do so, as you so rightly say, won't kill your computer, but it does have something of a nasty habit in that it can shorten the life-span of your disk.

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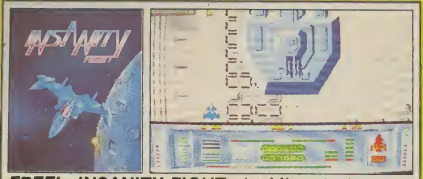

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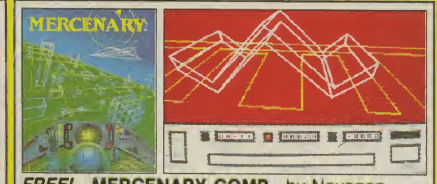

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Flying high

I am intrigued by the number of computer games buffs who buy flight simulation graphics hardware and yet find it difficult to exploit their full scope.

Last year I bought a copy of MicroSoft *Flight Simulator* 2 – which was subsequently updated to *Flight Simulator* 3 – and I was amazed at what can be done with these programs.

The considerable educational benefit plus the fun of navigating from one airfield in the States to another has to be tried to be believed. Getting better at this, with practice, I then set up other routes using the navigational aids (VOR) and went on to do cloud flying and then wind and turbulence effects.

Having achieved this, I then added an instrument landing (ILS) let-down to a night flight from San Francisco to Los Angeles, and found the realism uncanny. Unfortunately, the British/European sceneries leave a lot to be desired, so I have abandoned these.

I have a sneaking suspicion that many users are missing out on the real entertainment and skills development just lying around the corner.

Perhaps, through your columns, we could hear, from present and prospective flight simulation users, whether a club to develop this kind of activity would be supported.

Oh yes – I am already a real pilot of longstanding!

Alan Hawkins, Scarborough

This is positively uncanny. In the letters pages this year we have heard from not one, but two pilots who have written in praise of flight simulation software.

Are there any other pilots, or, indeed, any other people who find their 'real-lives' being echoed and enhanced by their computers?

More to the point, pilots (not exclusively) may wish to take note of a feature that will appear shortly in this magazine – about air traffic control.

Our aim – put as simply as simple can be – is to please. So how do you think we are doing?

Bigger or better?

I am writing in support of D Robinson's complaint about the lack of space given to the good old Commodore 64 in your magazine. As I haven't been reading *Express* for that long, I wouldn't know how much space has been "cut back", but I have noticed the same thing in other magazines and feel it must be stopped.

Seven months ago I upgraded to an Amiga 500 after having owned a 64 for about eight years. But, unlike many, I kept my 64 and still use it regularly.

It seems to me that even magazines which built themselves on the solid foundations of the 64, such as *Zzap!*, are now slowly squeezing it out into the cold. (Even if they do deny it.)

Although it is obvious that the 16-bit micros are the way forward, there are still thousands who have not, or cannot, upgrade and so still need accounting for. Anyway, many games available for the 64 are infinitely more playable then their 16-bit counterparts and it is a fact of life that pretty graphics and digitised stereo sound do not make a good game.

Apart from this it seems unjustifiable to me that, what is arguably the best 8-bit micro, is given half as much space as its 'rivals' when it is twice as good (I feel) as any of them. Before anyone gets their back up, I should point out that I have seen, heard, used and programmed the only two micros that could hope to come close to the 64 – ie Amstrads and Spectrums.

The only let-down on the 64 is the BASIC, but anyone with the slightest amount of willpower can have V2 BASIC doing backflips in no time. Also, it is faster than some 16-bit BASICs. As for the taunts of 'shoe box', it's not the looks, but the personality that counts, and my little shoe box oozes more personality than any computer I know.

So there you have it. My thoughts on 'space for the 64'. I hope you have other letters of support for the old dog, because there's more than a few years life in it yet. We mustn't let the 64 be bullied into its grave prematurely, whether it's by its own big brother or any other would-be exterminator.

It has held them all off this long, why should it give up now? If it does, it'll be due to suffocation by the media, not the quality of the opposition. For God's sake, give it room to breathe. At least as much as the other 8-bits.

Adam Wright, Thorplands, Northampton

You put your finger on an issue that bears thinking about.

You are absolutely right – there are thousands of computer owners out there who "have not or cannot" upgrade. But why haven't they? Of course for a myriad of reasons. But, further, some of them may not need to upgrade at all. Some of the people out there may have machines that do just fine, thank you. After all, isn't a computer simply a device – a means by which one works at a desired task?

I submit that bigger is not only not always better – it is sometimes unnecessary as well.

Watch your words

Whenever you mention *WordPerfect* in one of your Buyers' Guides, you say it has complex command sequences which must be learnt 'by rote'.

This is nonsense. Users quickly learn – by habit, not by rote – the high level comands they use most often. For the others, a quick glance at the function-key template is all that is needed. The low level commands and detailed options are prompted by on-screen menus.

At the same time, you are always highly uncritical of *ProText* and never point out that it is 'modal' – it has an Edit Mode and a Command Mode and you have to switch between them. Human factors experts unite to condem this out-of-date, inefficient and user-hostile form of software design.

Choosing a WP is always a personal decision, based on subjective factors. But a Buyers' Guide should try to be objective or, at the very least, should not be actively misleading.

Martyn Dryden, Wimborne, Dorset

Having only recently joined the editorial staff at *Express*, our editor, Martyn Lester, has not had time enough to turn his attentions to absolutely every aspect of the magazine.

We have, however, been warned that a substantial re-think of the Buyers Guide is a task that awaits.

As for your comments about objectivity – you are undoubtedly correct. But give us a chance. We are busy as little beavers most of the time.

There is so much to do on a weekly – we are positively under water most of the working week.

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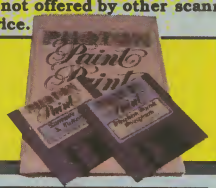

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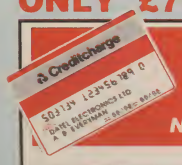

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